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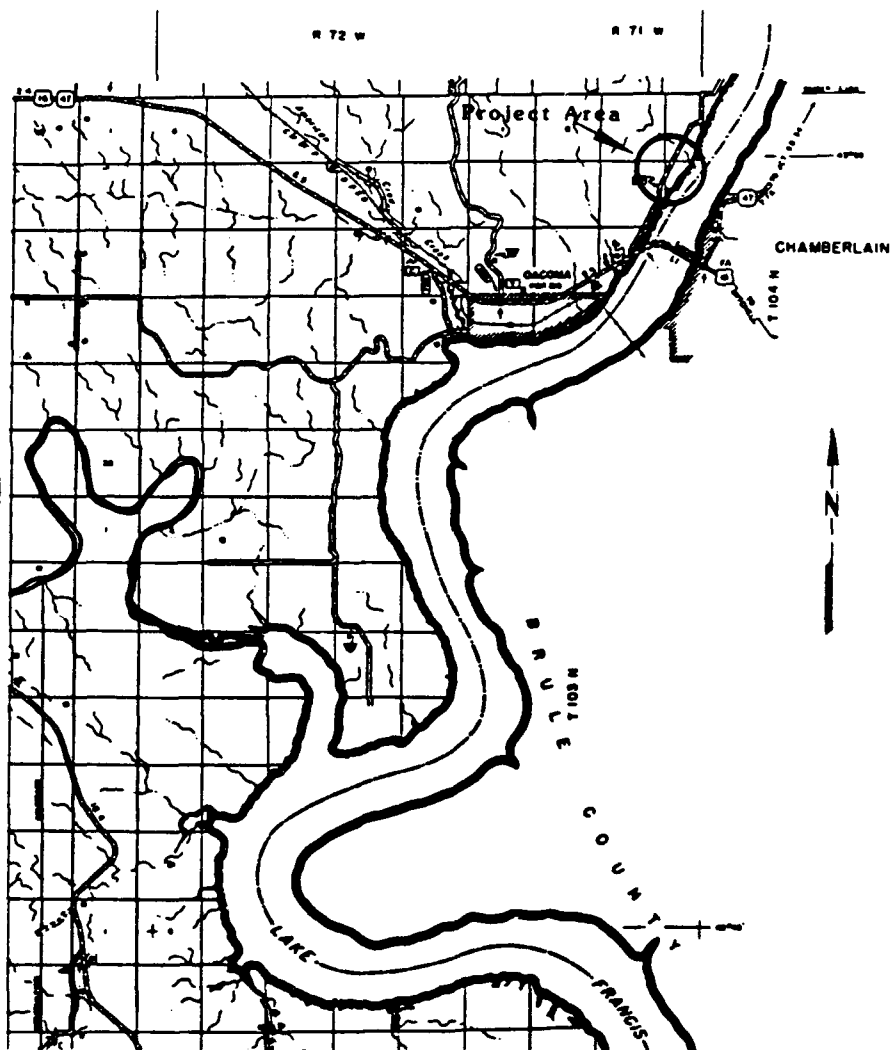
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An Intensive Cultural Resources Survey And National Register Evaluation Of Archaeological Sites At The Proposed River Ranch Resort In Lyman County, South Dakota

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Rapid City, South Dakota

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**AN INTENSIVE CULTURAL RESOURCES SURVEY
AND
NATIONAL REGISTER EVALUATION
OF
ARCHAEOLOGICAL SITES
AT THE
PROPOSED RIVER RANCH RESORT
IN LYMAN COUNTY, SOUTH DAKOTA**

by
Roger Wardlow
and
William B. Lees

Submitted to:

U.S. Army Corps of Engineers
Omaha District

Contract Investigation Series
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Prepared by:

State Archaeological Research Center
Rapid City, South Dakota

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report details an intensive cultural resources survey of approx. 30 acres, the National Register Evaluation of two archaeological sites in Lyman Co. S.D. The intensive survey did not locate any new cultural resources and no previously recorded sites within the survey area. The evaluation of 39LM253 resulted in the determination that the site is not located within the project area. The evaluation of 39LM200 resulted in the determination that the site is not eligible for inclusion onto the National Register of Historic Places.		

ABSTRACT

An intensive cultural resources survey of approximately 30 acres and the National Register Evaluation of two archeological sites were conducted along the west bank of Lake Francis Case. The work was carried out under contract with the River Ranch Developers of Sioux Falls, South Dakota by the State Archaeological Research Center, Rapid City.

The intensive survey did not locate any new cultural resources. No previously recorded sites were within the survey boundaries. The proposed River Ranch Resort project will not affect any cultural resources within the surveyed area.

The investigation of 39LM253 determined that the site was not located within the present River Ranch Resort project boundaries. The project will have no effect on the site.

39LM200, an historic site, was examined through literature searches, informant interviews, survey, mapping, excavation, and artifact analysis. The site is considered as not eligible for inclusion onto the National Register of Historic Places.

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Chapter One

INTRODUCTION

The results of the 1989 cultural resources investigations at the proposed River Ranch Resort Project along the west bank of Lake Francis Case, Lyman County, South Dakota (Figure 1) are presented in this report. The River Ranch Resort Project includes the construction of marinas, townhouses, a motel, cabin sites, recreational vehicle facilities and other recreational facilities. The cultural resources investigations included an intensive survey of approximately 30 acres and the National Register evaluation of two archaeological sites. The River Ranch Developers of Sioux Falls, South Dakota, contracted with the South Dakota State Archaeological Research Center, in order to fulfill requirements established by the U.S. Army Corps of Engineers, Omaha District.

The purpose of the investigation performed herein by the Contractor for the River Ranch Developers, required by the U.S. Army Corps of Engineers, is to meet obligations to Federal historic preservation legislation and associated implementing regulations. The most pertinent for this investigation are:

- Public Law 86-523
- Public Law 89-665
- Public Law 95-341
- Public Law 91-190

The sites scheduled for testing included one prehistoric site, 39LM253, and one historic archeological site, 39LM200. These sites were tested as a result of the recommendations made by the Corps of Engineers, Omaha District. Previous investigations of the sites resulted in the failure to relocate one site, 39LM253. 39LM200 was recommended as not National Register eligible in no need of further work by Winham (1984).

According to the Scope-of-Work, the major objectives of the survey and National Register testing program were to (1) locate or relocate any cultural resources within a 20 acre (the original area was 20 acres but an additional 10 acres was surveyed as a buffer zone against possible impact by heavy equipment turn-arounds, etc.) impact area and to provide a determination of (2) the nature of the prehistoric and historic archeological resources present, (3) their areal and temporal extent, (3) their cultural and scientific importance, (4) their potential eligibility for the National Register, and (5) possible alternatives for the mitigation of the potentially eligible National Register sites.

The following report discusses the results of the investigations. All of the chapters mentioned below were authored by Roger Wardlow excluding Chapter Eight, which was written by William B. Lees and Roger Wardlow. Chapter Two discusses the environmental setting of the project area. Chapter Three reports on the previous cultural resources investigations of the area and Chapter Four discusses the culture history. The research design and methodology is presented in Chapter Five and Chapter Six gives the results of an intensive surface survey of proposed impact areas. Chapter Seven deals with the

evaluation of 39LM253 and Chapter Eight discusses the evaluation of 39LM200. Chapter Nine is a summary of the report along with the recommendations for each aspect of the project.

Chapter Two

ENVIRONMENTAL SETTING

PHYSIOGRAPHY

The project area lies on the west bank of the Missouri River, Lake Francis Case Reservoir, Lyman County, South Dakota. It is situated directly across the river from the town of Chamberlain, Brule County, South Dakota. The Missouri River forms the boundary for Brule County and Lyman County (Figure 1).

The study area, as well as all of Lake Francis Case Reservoir, is included in the largest physiographic region of the Great Plains Province. This region is known as the Missouri Plateau. General characteristics of the Missouri Plateau include a network of east flowing rivers, stretches of hilly uplands with a butte and canyon topography (Rothrock 1943).

The Missouri River, which flows south and southeast along the eastern border of Lyman County, has cut a trench 300 feet (91.44 m) to 450 feet (137.16 m) deep and 2 (3.3 k) to 4 (6.6 k) miles wide (Schumaker 1987). Several small, unnamed, intermittent drainages are present within the project area. Pontoon Creek, which is the closest, is a relatively large west bank drainage that empties into the Missouri River approximately one and one-half miles downstream from the project area. The west bank of Lake Francis Case, in comparison to the east bank, has more extensive river breaks, slightly less southerly facing slopes and slightly fewer level to gradually sloping acres (Winham et al, 1984:7).

Elevation in Lyman County ranges from 1,375 (419 m) to 2,262 (689 m) feet above sea level. The lowest elevation is in the southeastern portion, along Lake Francis Case. The highest is on Medicine Butte, which is located north of the city of Reliance (Schumaker 1987).

GEOLOGY

The general geology of the region surrounding and including the project area has been aptly described by Winham et al:

The Cretaceous-age bedrock is Niobrara chalk and Pierre shale (Curtis 1950; Petsch 1951). Niobrara chalk underlies the Pierre Shale and is exposed along the lake at slightly below the water level. In upward succession, the Pierre shale consists of Sharon Springs, Gregory, Sully, Virgin Creek, and Mobridge members. Within the project area natural geologic erosion has removed the upper members so that the Sharon Springs and Gregory members are exposed in escarpments and steep slopes or mantled by fluvial or eolian sediment (Winham et al 1984:7).

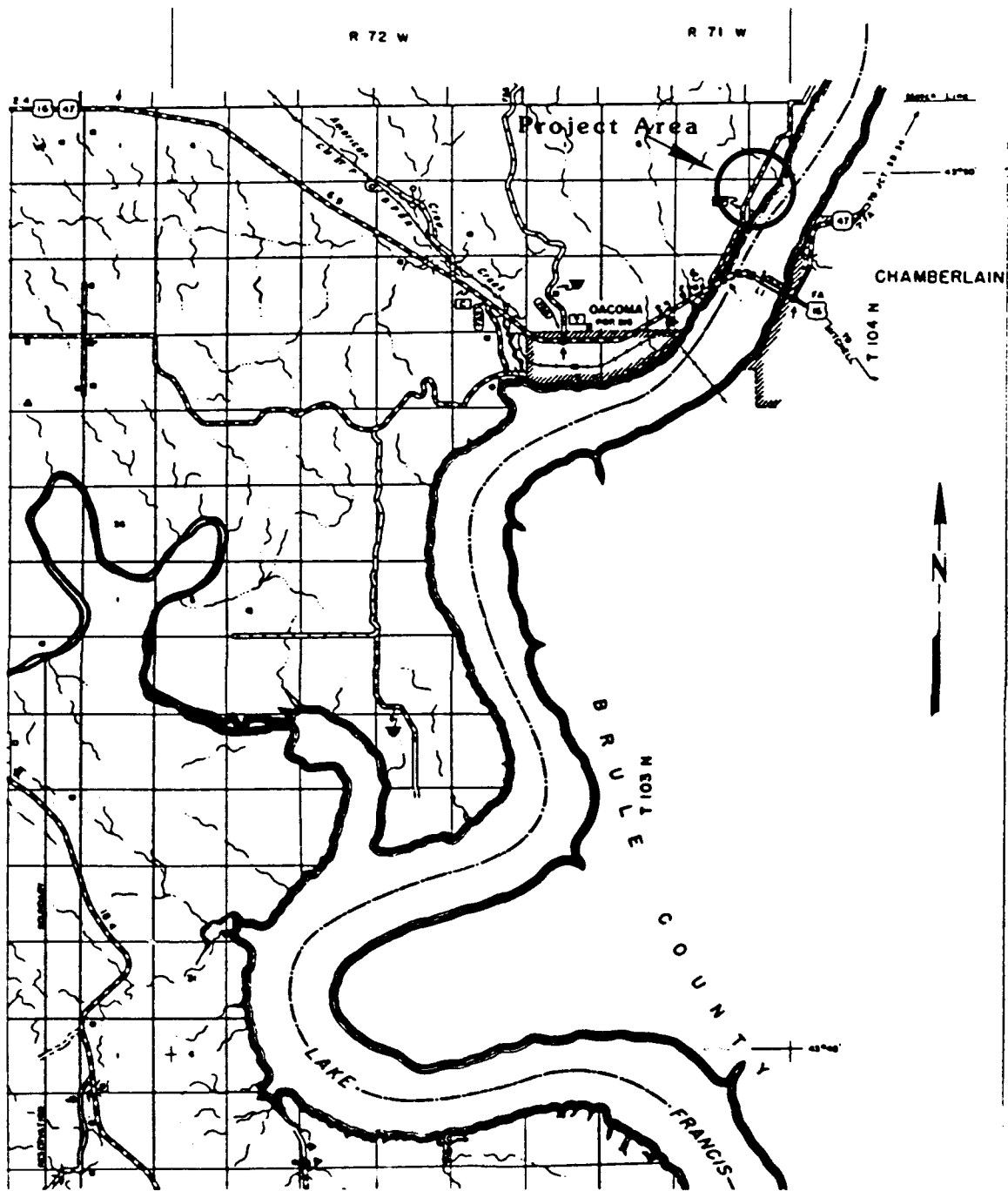


FIGURE 1
Map showing project area.

The immediate project area lies mainly on an older alluvium deposit. These are terrace deposits of silt, sand and gravel areas of old river meanders. Portions of the project area include the Gregory member of the Pierre shale group. The Gregory member consists of brown and dark gray bentonitic clay, brown concretions and one to three gray marl layers in lower parts (Bruno 1951).

SOILS

Five different soil series are present in the project area. A general description of these will be presented except for the one soil series which was encountered during the excavation of 39LM200. The soil series underlying the excavated area will be described in more detail.

The four soil series not included in the excavated areas of 39LM200 are as follows:

The Bullcreek Series

The Bullcreek series consists of deep, moderately well drained soils formed in clayey alluvium in upland valleys. These soils are on foot slopes, alluvial fans, and terraces (Schumaker 1987:67).

The Hurley Series

The Hurley series consists of deep, moderately well drained soils formed in clayey material on uplands (Schumaker 1987:70).

The Promise Series

The Promise series consists of deep, well drained soils formed in clayey material on foot slopes and uplands (Schumaker 1987:77-78).

The Sansarc Series

The Sansarc series consists of shallow, well drained soils formed in clayey residuum on uplands (Schumaker 1987:79).

The soil series which was found in the excavation area at 39LM200 is described below. Although the excavation units did not necessarily extend into the lower sections of the pedon, the entire description by Schumaker (1987:69) is presented below:

The Fairlo Series

The Fairlo series consists of deep, well drained soils formed in a mantle of loess over clayey material. These soils are found on uplands. Permeability is moderate in the subsoil and slow in the underlying material. Slopes range from 0 to 6 percent. Typical pedon of Fairlo silt loam, 3 to 6 percent slopes, 1,175 feet west of the southeast corner of Section 9, T. 107 N., R. 75 W.

A1---0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; weak fine subangular blocky structure parting to weak fine granular; slightly hard, very friable; many fine roots; slightly acid; clear smooth boundary.

A2---4 to 9 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak fine prismatic structure parting to weak coarse and medium subangular blocky; slightly hard, very friable; many very fine and fine roots; slightly acid; clear wavy boundary.

Bt1---9 to 14 inches; dark brown (10YR 4/3) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to weak coarse and medium subangular blocky; hard, friable; slightly sticky and slightly plastic; common fine and very fine roots; shiny films on faces of peds; neutral; gradual smooth boundary.

Bt2---14 to 18 inches; brown (10YR 5/3) silty clay loam dark brown (10YR 3/3) moist; moderate medium prismatic structure parting to moderate coarse and medium subangular blocky; hard, friable; common fine and very fine roots; slightly sticky and slightly plastic; shiny films on faces of peds; mildly alkaline; abrupt smooth boundary.

Bk1---18 to 24 inches; pale brown (10YR 6/3) silty clay loam, dark brown (10YR 4/3) moist; moderate medium prismatic structure parting to weak moderate subangular blocky; hard, friable, slightly sticky and slightly plastic; few fine and very fine roots; common fine accumulations of carbonate; strong effervescence; moderately alkaline; clear wavy boundary.

Bk2---24 to 29 inches; pale brown (10YR 6/3) silty clay loam, dark brown (10YR 4/3) moist; weak coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; common fine accumulations of carbonate; strong effervescence; moderately alkaline; clear wavy boundary.

2Bk3--29 to 55 inches; light brownish gray (2.5 YR 6/2) silty clay, dark grayish brown (2.5Y 4/2) moist; weak coarse subangular blocky structure; very hard, firm, sticky and plastic; many medium and coarse accumulations of carbonate; strong effervescence; moderately alkaline; gradual wavy boundary.

2Bk4--55 to 60 inches; light brownish gray (2.5YR 6/2) silty clay

loam, dark grayish brown (2.5Y 4/2) moist; weak coarse subangular blocky structure; very hard, friable, slightly sticky and plastic; common medium accumulations of carbonate; strong effervescence; moderately alkaline.

The A horizon has a hue of 10YR, value of 4 or 5 (2 or 3 moist), It is slightly acid or neutral. It is 6 to 10 inches thick. The Bt horizon has hue of 10YR or 2.5Y, value of 4 or 5 (2 to 4 moist), and chroma of 2 to 4. It is silty clay loam or silty loam. It is slightly acid to mildly alkaline. The Bk horizon has hue of 10YR or 2.5Y, value of 5 to 7 (4 to 5 moist), and chroma of 2 to 4. It is silty clay loam or silt loam. It is mildly alkaline or moderately alkaline. The 2Bk horizon has hue of 2.5Y of 10YR, value of 5 to 7 (4 to 5 moist), and chroma of 2 to 4. It is silty clay loam, silty clay or clay. It is mildly alkaline or moderately alkaline. Some pedons have shale below a depth of 40 inches (Schumaker 1987:69).

Soil descriptions from the actual excavation units can be found in Chapter Eight.

CLIMATE

The project area lies within a continental-type climate zone. Summers are generally quite warm with some cooler periods and occasional hot spells. Records kept during the period of 1963-1978 at Chamberlain, Brule County, indicate that the highest average temperature was 77.9 degrees fahrenheit, which occurred during the month of July. During the summer the average temperature is 75 degrees, and the average daily maximum temperature is 88 degrees. The highest recorded temperature of 112 degrees occurred on July 23, 1964, at Chamberlain (Vialle 1985). The total annual precipitation is generally 17 inches. The majority of precipitation (75 percent) falls during the months of April through September with June having the highest average of 3.63 inches. Sunshine is abundant at 70 percent of the time possible during the summers.

Winters are very cold although snowfall is usually not very heavy. The average seasonal snowfall is approximately 25 inches, most of this, on the average, occurring during the month of December. Prevailing winds from the south causes drifting which in turns keeps much of the ground free of snow. The coldest average temperature during the winter is 17.4 degrees, this occurring in January. Temperatures quite often dip below zero and have been as cold as 30 below zero on numerous occasions.

During the field work aspect of this project, several days were in excess of 90 degrees, with south and southeasterly winds estimated at 20 to 30 miles per hour. Several thunderstorms occurred but overall the sunshine was prevalent. Humidity was near the average of sixty percent during the afternoon. This portion of Lyman county certainly met or exceeded its recorded averages during this time period.

FLORA AND FAUNA

A transitional zone best describes the vegetational aspects of the project area. This transition occurs between two expansive vegetational zones known as the mixed grass prairie and wooded types (Johnson and Nichols 1979:7). Vegetation from either zone can occur

within the other if all the elements needed for their survival are present. Within the mixed grass prairie the principal dominant vegetation is:

Western Wheatgrass (*Agropyron smithii*)

Western Wheatgrass is a native, cool-season, sod forming grass with very strong rhizomes. It is a major range grass in the Northern and Central Great Plains, frequently occurring in nearly pure stands. Western wheatgrass was designated the State Grass of South Dakota in 1970 by action of the state legislature (Johnson and Nichols, 1970:11).

NeedleandThread (*Stipa Comata*)

Needleandthread or speargrass is a cool season, perennial bunchgrass. It is an important constituent of the upland prairies throughout the West. In the Great Plains its primary abundance is in the Mixed Prairie. In South Dakota it is principally associated with western wheatgrass, blue grama, and threadleaf sedge in the central and western portion (Johnson and Nichols 1970:52).

Green Needlegrass (*Stipa viridula*)

Green needlegrass, also called feather bunchgrass, is a cool season, perennial, bunchgrass. In South Dakota it reaches its greatest importance in the transition zone between the True Prairie and the Mixed Prairies, and in wetter portions of the Mixed Prairie. (Nichols and Johnson 1970:54).

Blue Grama (*Bouteloua gracilis*)

Blue grama is a perennial, warm season, short grass, and is native throughout the Great Plains and Southwest. Blue grama is found on many soil types in South Dakota, but is best adapted to medium and fine textured, relatively deep soils of rolling uplands (Nichols and Johnson 1970:58).

The principal dominant vegetation of the Wooded types, which includes the area of the Missouri River Trench and its tributaries is:

Cottonwood (*Populas*)

Cottonwoods, poplars and aspens are all members of the same genus. Seeds, buds, and twigs are important foods of numerous birds and mammals, including ruffed, spruce and sharptail grouse, prairie chicken, whitetail deer, moose, beaver,

porcupine, snowshoe hare, cottontail rabbit and black bear (Petrides 1972:210-211).

Black Willow (*Salix nigra*)

Black willow is found along stream banks, shores, meadows, ditches, floodplains and other wet places (Barkley ed. 1986:289). Its bark can be used for medicinal purposes and also provides tannin. The buds, leaves and twigs are eaten by livestock. The aforementioned willow parts as well as the fruit provide nourishment for whitetail deer, beaver, muskrat, hare, porcupine, moose, beaver, sharptail and ruffed grouse, elk, willow and rock ptarmigan (Petrides 1972).

American Elm (*Elmus Americanus*)

The American elm is common in a number of different habitats, but most abundant on the floodplains of rivers and streams (Rosendahl 1955). Due to the "Dutch" elm disease, which is a fungus spread by a beetle, this tree species has been severely affected. Many places along the Missouri River contain stands of dead Elm trees. Those elm trees surviving provide seeds which are eaten by ruffed grouse, gray and fox squirrels, bobwhites, prairie chicken, "Hungarian" partridge and opossum. The twigs are browsed by whitetail deer, cottontail rabbit and snowshoe hare (Petrides 1972).

Many other species of plants live in this transitional zone. One that deserves some attention with respect to this report is the Red cedar (*Juniperus virginiana*) tree. Before the building of Fort Randall dam and the subsequent inundation of this stretch of the Missouri River, an island supporting Red cedar existed. This island was located directly west of what was to become Chamberlain, South Dakota. An historical sign which once stood on the west end of the bridge approach of U.S. Highway 16 stated the following:

On Sept.17, 1804, Lewis and Clark camped on the west bank below the Island and passing it on the 18th said: "Passed an Island about the middle of the river at 1 mile this island is about a mile long and has a great perpotion of Red Cedar on it". In 1811 the Astorians called it Little Cedar and in 1843 Audubon called it Great Cedar Island" (Brule County History 1977:6).

The introduction of domesticated animals (e.g. cattle, sheep) and the breaking of the prairie sod for crop production caused stress on many of the native plants. Several introduced weedy plants such as sweet clovers (*Melilotus spp.*), Kentucky bluegrass (*Poa pratensis*), annual brome grass (*Bromus spp.*) and other nonindigenous plant species are found throughout the Northern Great Plains due mainly to the activities mentioned above. For a more comprehensive overview of the plants represented in the two grassland Provinces which enclose this transitional zone as well as the Wooded type zone itself see

Archer and Tieszen (1979) and Tibesar et al (1986).

Some of the more common prairie faunal species found in the area would have included bison (*Bison*), pronghorn antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), fox (*Vulpus fulva* and *Urocyon cinereogenteus*), coyote (*Canis latrans*), skunk (*Mephitis*), prairie dog (*Cynomys gunnisoni* and *Cynomys ludovicianus*), raccoon (*Procyon lotor*) and jackrabbit (*Lepus townsendi*).

Avifauna found in the area would have included large numbers of migratory waterfowl, many varieties of hawks, both golden (*Aquila chrysaetos canadensis*) and bald eagles (*Haliaeetus leucocephalus*), sharp-tailed grouse (*Pedioecetes phasianellus*) and prairie chickens (*Tympanuchus cupido*).

Amphibians such as plains spadefoot toad (*Scaphiopus bombifrons*), great plains toad (*B. cognatus*), western chorus frog (*Pseudacris triseriata*) and the northern leaping frog (*R. pipiens*) could have been found in the area.

Reptiles that were present included the common snapping turtle (*Chelydra serpentina*), false map turtle (*Graptemys pseudogeographica*), western painted turtle (*Chrysemys picta belli*), red-sided garter snake (*Thamnophis sirtalis parietalis*), western plains garter snake (*T. radix haydeni*), plains hognose snake (*H. nasicus*), eastern yellow-bellied racer (*Coluber constrictor flaviventris*), bullsnake (*Pituophis melanoleucus sayi*) and the prairie rattlesnake (*Crotalus viridis*).

The Missouri River supported many varieties of fish including pallid sturgeon (*scaphirhynchus albus*), shovelnose sturgeon (*S. playorhynchus*), longnose gar (*Lepisosteus osseus*), shortnose gar (*L. platostomus*), northern pike (*Esox lucius*) as well as many types of carps and minnows (*Family cyprinidae*).

Chapter Three

PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

Since the early years of the twentieth century archaeological investigations along the Missouri River have taken place. A summary of those investigations which were conducted within or nearby this project vicinity will be discussed below. The first fifty years of this century will be discussed first and subsequently each decade and its investigations will be summarized.

1912-1950

Any discussion of early archaeological investigations in South Dakota must include the work of William Henry Over. From 1913 to 1949, W.H. Over was Curator and Director of The University of South Dakota Museum (currently the W.H. Over Museum) in Vermillion (Helgevold 1981). Over conducted many surveys along the Missouri River and although his survey techniques are considered as less than scientific and occasionally inaccurate, he none the less was the major figure of the archeology of South Dakota during this time period. Some of W.H. Over's work included recordation of sites in Lyman and Brule Counties. Six "village" sites were recorded in Brule County. In Lyman County, Over lists 29 sites in all (Sigstad and Sigstad 1973). None of these sites are within the immediate project area.

Other work conducted along the Missouri River during the first half of this century includes a potentially uncited (until Winham 1984) project by G.H. Gilmore and Earl H. Bell for the University of Nebraska.

During 1946 and 1949, Merrill J. Mattes of the National Park Service conducted field and literature research to identify historical sites within the Fort Randall Reservoir area. His studies identified many historic fort locations and the Indian groups often associated with them.

During the 1940s, plans were made by the United States Congress to construct hydroelectric dams throughout the nation, including the Missouri River in both North and South Dakota. The passage of the Flood Control Act of 1944 (U.S. Statute 1944) in light of the Historic Sites Act of 1935, sparked several plans by differing agencies and organizations on how to implement the archeological program that would be needed (See Helgevold 1981:39-40). This eventually led to the Smithsonian Institution's development of a special River Basin Surveys unit (referred to herein as the RBS) under the direction of Frank H.H. Roberts.

The first of these surveys (involving this report's study area) took place in 1947 under the direction of Paul L. Cooper (Cooper 1949). This was basically a reconnaissance survey of the proposed Lake Francis Case area.

1950-1960

The RBS continued its investigations during the 1950s and in fact this was when the majority of their work was accomplished. It should be stated that occasionally archeological activities for the RBS were carried out by agencies or organizations in cooperation with the RBS. A list of those people in charge of various projects, the dates they were conducted, along with the organization's names is presented below (from Winham 1984). For a more detailed description of these project and their results see Olson and Zimmerman (1979), Winham (1984) and Caldwell (1984).

1950--Thomas R. Garth--RBS--Archeological

1951--Carl F. Miller--RBS--Archeological

Marvin E. Kivett--Nebraska State Historical Society--Archeological

These projects involved both identification of sites as well as some extensive excavations. Except for Oscar L. Mallory's work in 1964, this decade saw the end of the River Basin Survey projects.

1960-1970

The decade of the sixties saw only two investigations conducted near the project area Wesley R. Hurt conducted surveys along both banks of the Fort Randall Reservoir and also excavated two sites. Oscar L. Mallory conducted a shoreline reconnaissance for the RBS in 1964.

1960--Wesley R. Hurt--W.H. Over Museum, University of South Dakota, National Park Service and the Corps of Engineers--Archeological

1964--Oscar L. Mallory--RBS--Archeological

Oscar Mallory's work in 1964 located 39LM254 (also known as 39LM34). The site is located just north of the project area currently under investigation. This "village" site was recommended for further testing. Mallory believed that work at the site would be helpful to better define the final phases of the Coalescent tradition (Mallory 1965:27).

This decade brought to an end the major salvage programs conducted by the RBS along the Missouri River although Marvin Kay in a 1973 report recommends continuation of the salvage work.

1970-1980

The seventies produced two large scale reports. Marvin Kay (1973) conducted a reconnaissance survey for the National Park Service. Olson and Zimmerman (1979) performed an archeological and historical reconnaissance for the Corps of Engineers. Otherwise only small scale surveys took place in the vicinity of the project area. These ranged from proposed wastewater treatment facilities surveys to irrigation pump stations.

1973--Marvin Kay--National Park Service--Archeological

1977--Joseph G. Lazio--Corps of Engineers--Archeological

1979--Timothy R. Nowak--Corps of Engineers--Archeological
1979--Gary D. Olson and Larry J. Zimmerman--Augustana Research Institute--
Archeological and Historical

1980-1990

The early eighties produced numerous small scale surveys and reports. These ranged from gravel pit surveys to proposed recreational area developments. One exception to this general trend was an historical/geographical study done by Peggy E. Year (1981). This project dealt with the abandonment of towns in South Dakota.

The latter half of the 1980s saw final reports on several survey projects and evaluative site testing programs to determine National Register Eligibility. A reconnaissance survey by Winham (1984) was responsible for the recordation of site 39LM200, which this report evaluates for National Register Eligibility.

1980--Timothy R. Nowak--Corps of Engineers--Archeological
1981--Timothy R. Nowak--Corps of Engineers--Archeological
Peggy E. Year--Historical Preservation Center--Historical/Geographical
1982--Thomas W. Haberman--Department of Transportation--Archeological
Timothy R. Nowak--Corps of Engineers--Archeological
1984--R. Peter Winham--Archeological Laboratory of the Center for Western
Studies--Archeological
1986--R. Peter Winham--Archeology Laboratory of the Center for Western Studies--
Archeological
William L. Tibesar--Larson-Tibesar Associates--Archeological
1987--R. Peter Winham--Archeology Laboratory of the Center for Western Studies--
Archeological
1989--Thomas L. Larson--Larson-Tibesar Associates--Archeological

Overall, the archeology of the Lake Francis Case vicinity has suffered, mostly in the earlier years. This is mainly due to the lack of proper funding rather than the scientific methods employed. Winham (1984), Mallory (1965) and Kay (1973) present good cases concerning the general inadequacies and deficiencies of archeological investigations of this area.

Chapter Four

CULTURE HISTORY

The project area lies within the Middle Missouri Subarea, which is one of the five subareas of the Plains (Lehmer 1971:28). More specifically, this project is part of the Big Bend Study Unit as defined by Buechler (1984:62). This section of the report will give an overview of the major periods of prehistory and history of the study area.

Paleoindian Period (11,500 BP - 7,500 BP)

People of the Paleoindian Period are considered to have been nomadic groups of the Big Game Hunting tradition, exploiting Late Pleistocene megafauna such as mammoth and bison (Willey 1966; Frison 1978). The technology involved in this process is at present best represented in the archeological record by fluted and unfluted lanceolate projectile points and knife forms. This technology has been documented by investigations in various areas of the Plains (e.g. Ahler et al 1974; Agenbroad 1978; Frison et al 1978; Frison and Stanford 1983; Frison and Todd 1986; Frison 1974).

Although the major emphasis of this period is on the specialized technology associated with megafaunal exploitation, this may be in large part due to the types of sites that have been "available" for study. Locating Paleoindian sites has been difficult at best and the degree of preservation of cultural material, other than the lithic artifacts, appears to be minimal. Perhaps future investigations and advanced techniques will be able to shed light on the probable diversity of use of both faunal and vegetative resources during this late Pleistocene/Early Holocene period.

Within the Big Bend Study Unit no sites representing the Paleoindian tradition have been found. The paucity of these types of sites within the study unit may be due, in part, to the lack of investigations along intact Missouri River terraces and other off-river land forms which date to this time period. Isolated projectile points are occasionally found on the surface (Lass 1977:2).

Plains Archaic (7,500 BP - 2,100 BP)

The Plains Archaic tradition is generally assumed to be an adaptation to the changing Plains environment from Late Pleistocene megafaunal exploitation to a more generalized hunting and gathering strategy geared towards the Holocene environment. The extinction of megafaunal species required a shift to animals and plants adaptive to the Holocene period, however the perceived "radical" shift in subsistence patterns (that is from a strong emphasis on megafauna rather than a diverse strategy of both faunal and vegetative resources) may be the result of the lack of located or well preserved sites representing the Paleoindian period. None the less, the evidence presently available indicates that there was a change to a more regionally restricted patterns of tool manufacture, reflected by the

different style of stemmed and notched projectile points and hafted cutting tools (Frison 1978). Ground and pecked stone tools are often found in the artifact assemblages from this time period.

The Archaic period has been divided into three parts, the Early Archaic (7,500 BP - 4,500 BP), the Middle Archaic (4,500 BP - 3,000 BP), and the Late Archaic (3,000 BP - 2,100 BP). Within the study unit, McKean phase (Middle Archaic) projectile points have been found at several sites (Neuman 1964). Remains found at site 39BF2, the Medicine Crow site, have Archaic materials (Irving 1958). Based on the presence of several side-notched projectile (dart) points the Early Archaic component at the site was assigned to the Logan Creek complex. Duncan points found represent the McKean complex of the Late Archaic (Ahler and Toom, 1989).

Plains Woodland (2,100 BP - 1,100 BP)

Although the Plains Woodland period differs in many ways from the Archaic period, it has been stated by Benn (1981:344) that "The basic tenet emphasized here is that many Woodland patterns were formulated during the Archaic periods". There is an increase in population, more dependence on communal bison hunting as well as the appearance of mortuary ceremonialism (mounds), semi-permanent/habitation sites, ceramics, the bow and arrow, as well as incipient horticulture. For more detailed investigations see (Ahler et al 1981; Ahler et al 1982; Hurt 1952; Smith 1975, 1977; Wood 1960; Wood and Johnson 1973; Hoffman 1968; Neuman 1960, 1961a, 1961b, 1964a, 1964b; Toom and Picha 1984; Steinacher and Toom 1983; Winham and Lueck 1984; Olson and Zimmerman 1979; and Larson-Tibesar 1989).

The Woodland Tradition in the study area is represented by two phases. The Valley phase, a Middle Woodland subdivision, and the Loseke Creek phase, a Late Woodland subdivision. The cultural aspects of these phases are described by Winham and Lueck (1984:39-40,42).

Plains Village (1,100 BP - 315 BP)

The Plains Village tradition represents an initial flourishing of the preceding Plains Woodland period. More complex cultural developments are evident, followed by an eventual collapse of the village lifeway. A general heightened complexity in ceramic manufacture, horticulture, increased sedentism and so on are evident in the archaeological record. The subsistence base for this period was horticulture, gathering of wild plants and hunting (predominantly bison). Earthlodge villages, both fortified and unfortified, peripheral campsites, burial grounds, various activity areas and occasional isolated earthlodges are representative of Plains Village tradition.

Lehmer (1971) structured this period into the Initial (A.D. 900 - 1400), Extended (A.D. 1100 - 1550) and Terminal (A.D. 1550 - 1675) variants of the Middle Missouri tradition and the Initial (A.D. 1400 - 1550), Extended (A.D. 1550 - 1675), Post-Contact (A.D. 1675 - 1780) and Disorganized (A.D. 1780 - 1862) variants of the Coalescent tradition.

The Initial Middle Missouri variant peoples likely entered the area from the southern Minnesota and northern Iowa region. This group may have been influenced to an uncertain

degree by Mississippian cultures (Wedel 1961; Lehmer 1971). Settlements were located on the narrow spurs of floodplain terraces with a stockade and trench across the spur edge (Ludwickson et al 1981:149). Two sites in the region which represent the period include the Swanson Site (39BR16) and the Over phase component of the Crow Creek site (39BF11). Closer to the project area some of the sites of this period include 39LM57, 39LM58, 39LM59 and 39LM84 (Winham 1984:48).

Peoples of the Extended Middle Missouri variant are thought to have moved south out of present day North Dakota into the Bad-Cheyenne region. Warring between the Extended Middle Missouri variant and the Initial Middle Missouri variant is suggested by the building of fortified villages by both groups.

The Initial Coalescent variant peoples represent the interaction or blending of both Middle Missouri and Central Plains traditions. The ancestral home of this group is thought to have been in the Central Plains subarea. Movements into the Middle Missouri regions are thought, by Lehmer (1971:115), to be due to adverse environmental conditions, principally drought.

Sites of this period are generally located on terraces, terrace remnants and bluffs adjacent to extensive floodplains in an area along the Missouri from near Pierre, South Dakota to Ponca Creek in northeastern Nebraska (Winham 198:49). The Crow Creek site and the Talking Crow site (39BF3) have components of this variant.

Developing out of the Initial Coalescent variant, the Extended Coalescent variant represents a expansion in both number of villages as well as the overall land area involved. fortifications become fewer except for the northern and southern edges of their domain (Lehmer 1971:115,116). Changes in projectile points (arrow) from notched to unnotched become more common, pottery temper becomes sparse and vessel walls thinner and catlinite is more abundant. Pecked and polished grooved axes are rare (Lehmer 1971:118-119).

As many as 19 known sites in the region have Extended Coalescent components. Some of the more intensively studied sites include 39LM1, 39LM39, the Spain sites and the Scalp Creek site.

Groups representing the Extended Coalescent variant and the Terminal Middle Missouri variant, from 440 B.P. to 315 B.P., coexisted (Lehmer 1971:120-121). Extended Coalescent people lived south of the Terminal Middle Missouri people, the latter occupying an area from approximately 30 miles south of present day Bismark, North Dakota to 20 miles north of Mobridge, South Dakota (Lehmer 1971:121).

After 315 B.P. European influences and fur trading brought about major changes in the social structure of these two groups (Lehmer 1971, Wood, 1971, 1974). These two groups are described as the Terminal Middle Missouri variant. Trade goods which were integrated into their economies and a rampant epidemic of smallpox were the major factors in the termination of the Plains Village period. Survivors from the Mandan and Hidatsa, and the Arikara eventually came together at their last traditional earthlodge village site, Like-A-Fishhook, located in North Dakota.

Euro-American Influences

This section will discuss the early fur trade and exploration as well as the military aspects of the region. The settlement of the area after 1858, which is the year the Yankton Dakota ceded most of the southeastern part of the state, thus beginning the process of migration of settlers into the state. The settlement of the area involved with this project will

be discussed in Chapter Eight. The settlement phase directly involves those people, places and events associated with site 39LM200, ergo it is best suited for placement in that particular context.

The first significant factor which brought about contact between Euro-Americans and Amerindian populations of the Middle Missouri area was primarily fur trading (Lees 1985:44). Another important element was the search for a navigable passage to the Pacific Ocean.

By the early 1700s French fur traders had moved into the area west of the Great Lakes to the Upper Mississippi. The first white man to enter South Dakota is an uncertainty but several names such as Daniel Greysolon (the Sieur Dulhut after whom the city of Duluth, Minnesota was named) and Pierre Charles Le Sueur are suggested as possibilities. A map published in 1701 by William De L'Isle showed a trail leading from the Mississippi to the falls of the Big Sioux River (Karolevitz 1975).

The La Verendrye brothers, Louis Joseph and Francois, were definitely some of the earlier explorers of South Dakota. A lead plate bearing inscriptions of the claiming of the land for France and the date of the burying of the tablet, was found near present day Fort Pierre. The date was March 30, 1743 .

French-Canadian trappers continued to explore and utilize the area, however France as a nation was more concerned with its war with Britain. When the French and Indian war began to favor the British, the king of France ceded the territory west of the Mississippi to his cousin, Charles II, the king of Spain, in 1762. This event would become known as the Treaty of Fontainebleau.

During the 34 years of Spanish rule the fur trade increased on the Missouri River. Expeditions by the head of the Missouri Company, Jean Baptiste Trudeau (1795-1976), as well as Jacques D'Eglise (1794), were among the more notable. The advance of opportunists into the area, particularly those of British manner (such as the Hudson's Bay and Northwest Companies) caused increasing concern by the Spanish for their territorial possession.

In 1802, France reclaimed this territory from Spain in the Treaty of San Ildefonso. The United States then negotiated with France and purchased "Louisiana" from the French in 1803. This acquisition lead directly to the Lewis and Clark expedition which has been well documented. Lewis and Clark passed through South Dakota on their way to the Pacific as well as on their way home. They spent 54 days in South Dakota, on their way west, camping in over 40 separate locations. The trip back to St. Louis brought them again through South Dakota but using the downstream current it took only two weeks to navigate the distance.

After the explorations of Lewis and Clark, the volume of non-Indian traffic increased. Furs from available species and the tongues of Bison (a food delicacy) were the major commodities exploited. The opportunities for monetary rewards were great and this motivated individuals and companies to begin their exploits. Manuel Lisa and Pierre Chouteau, Jr. were the most notable.

Manuel Lisa, a Spaniard, formed the St. Louis Fur Company, and began operations in South Dakota and elsewhere. Lisa was purported to have treated the Indians with more respect than most and this may have been a factor in his success. His company and its development of the fur trade was a major force along the Missouri River.

Pierre Chouteau, Jr., grandson of one the original French founders of St. Louis, was associated with the American Fur Company. In 1831 Chouteau sent a steamboat, the

Yellowstone, up the Missouri to Fort Tecumseh (located on the mouth of the Bad or Teton River in South Dakota). This innovative move proved to be much faster and had more carrying capacity than the oar-and-paddle keelboats which were in use at the time. The following year Fort Tecumseh was replaced with a new fort, named after Chouteau. It became known as Fort Pierre and is considered to be the first white settlement in the state.

The increased activities into the Middle Missouri region brought prosperity to some but the tensions between the whites and the Indians heightened. This tension led to the establishments of military forts in the area. The fur trading "forts" were more or less just outposts not really designed for military purposes. The United States began building both temporary or minor fortifications as well as permanent military forts. Some of these forts were located nearby or in the general vicinity of the project area. These included Fort Brasseur, Fort Recovery, Fort Kiowa and Fort Lookout. These forts and the activities associated with them are discussed in more detail in Winham (1984; 55-60).

The fur trading business began to wane and the migration of settlers heading to the far west was on the rise. The military presence in the area was essential for protection of the westward bound settlers as well as for the establishment of government authority over the region. These factors coupled with the desire by the Indians to maintain their established lands led to warfare. Many battles and massacres took place, all of this eventually leading to the military dominance of the region by the United States government. Ultimately, treaties were signed (the 1858 treaty relinquished ownership to approximately 14 million acres of land between the Big Sioux Rivers and the Missouri south of a line running from Lake Kampeska to Fort Pierre) and the establishment of reservations began. With the signing of the 1858 Treaty the advancement of Euro-American settlers was to begin in earnest.

Chapter Five

RESEARCH DESIGN AND METHODOLOGY

The research orientation and methodology for the investigation of cultural resources within the project area will be presented in three parts. First, the surveying of property (approximately 30 acres) for site location and recordation. Second, the investigation of Site 39LM253 (prehistoric) and third, the investigation of Site 39LM200 (historic). The research objectives will be given for each followed by the field methods used. A more detailed account of the field methods will be given in the individual chapters dealing with the three parts of the project mentioned above.

Survey

The main objective of cultural resources surveys are to locate and record archaeological/historical sites which may be found within the project domain. The methods involved in achieving this goal include:

- 1) Literature Search.
- 2) Intensive pedestrian survey.
- 3) Subsurface testing if deemed necessary.
- 4) Site recordation/forms which meet or exceed the information required by the state of South Dakota.
- 5) Recommendations for future management action if necessary.

39LM200 (Historic) and 39LM253 (Prehistoric)

The Scope-of-Work (Appendix D) states that the following objectives be met if possible:

- 1) Determine if the site is within the project domain.
- 2) Establish the culture-historical framework.
- 3) Establish the site function.
- 4) Establish the horizontal boundary.
- 5) Establish the vertical boundary.
- 6) Establish the integrity of the site.
- 7) Determine the significance of the site.

The methods involved for reaching these goals include:

- 1) Literature Search.
- 2) Informant interviews.
- 3) Intensive pedestrian survey.
- 4) Site mapping.

- 5) Excavation units.
- 6) Laboratory analysis.

The methodologies involved for all three parts described above would include the accepted professional techniques of data recovery and recordation. As stated earlier, the specifics of research conducted on each aspect of the project will be presented individually in their respective chapters.

Chapter Six

INTENSIVE SURFACE SURVEY

An intensive (100 percent) surface survey was included as part of the Scope-of-Work necessary for completion of this project. The areas to be surveyed included a proposed small pond for fishing, a parking lot and an area that does not have, to our knowledge, a designation of use. The survey areas are located in Sections 8 and 9, T104N, R71W (Figure 2).

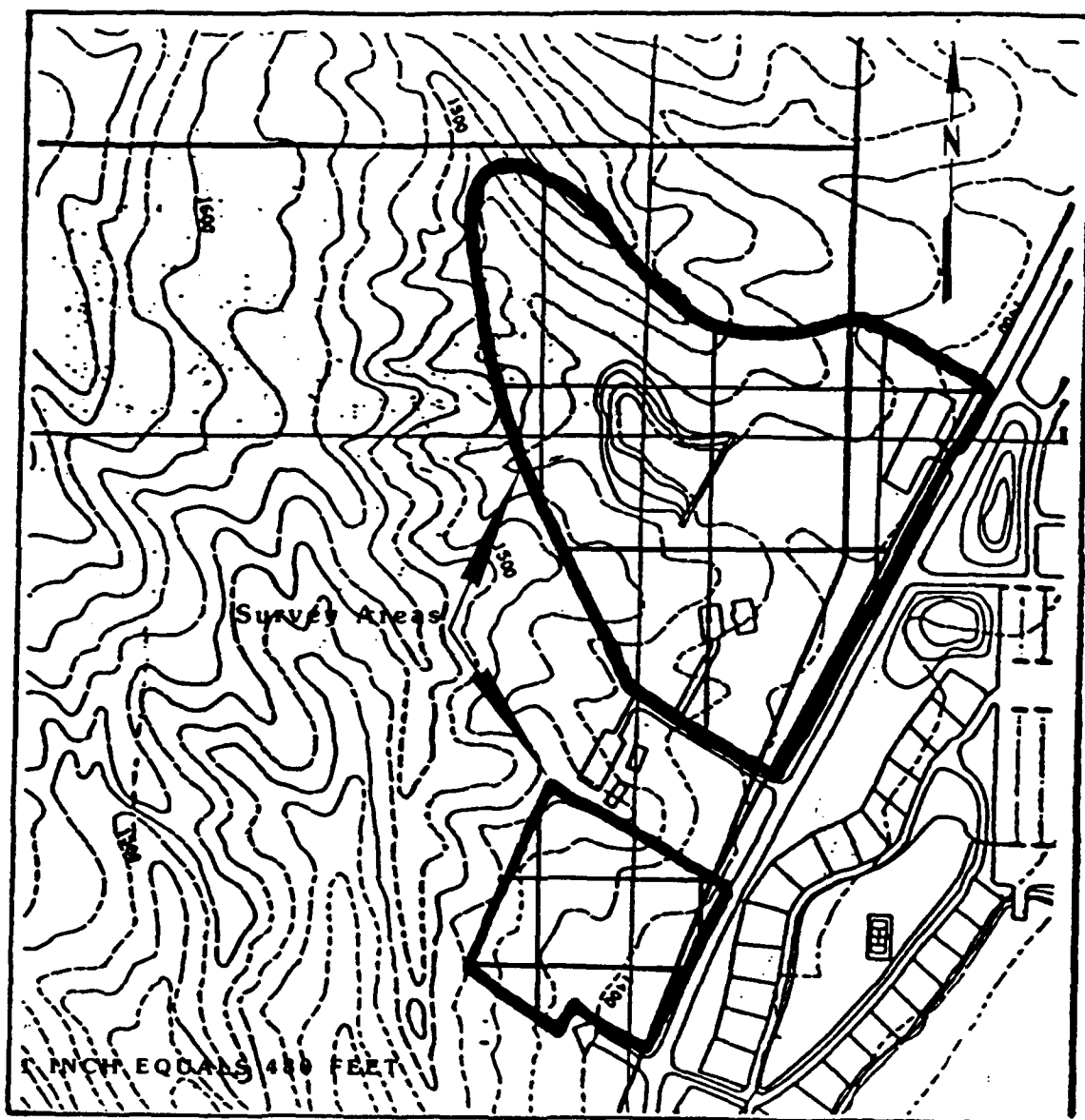
A search of the literature, including published and unpublished reports, the State Wide Site Card file, the State Wide Master Site Quadrangle Maps, indicated that no previous surveys had been conducted within the designated survey boundaries. No sites had been recorded within the survey area either. Many cultural resource surveys and previously recorded sites are in vicinity of the survey area. These are discussed in Chapters Three and Four.

The on-the-ground survey was conducted by three individuals spaced at maximum intervals of 15 meters. The designated survey areas were examined as well as an added "buffer zone" consisting of additional transects. This was done to insure against possible impacts by the movement of equipment into these zones (e.g. turn-a-rounds, repositioning for excavation, etc.), as well as for the examination of finger ridges which intuitively appeared to have a high site probability, and which may eventually be effected by erosion due to the small fishing pond. This additional zone expanded the survey acreage from approximately 20 ac to 30 ac. Ground surface visibility was adequate and all other exposures, including rodent burrow backdirt, anthills and erosional features were rigorously examined. No subsurface probes were deemed necessary due to the adequate degree of surface visibility and the ample amount of erosional activity which permitted a generous look at the subsurface situation.

The results of the intensive survey were negative. No cultural resources were found. An historic site is located in the S 1/2, SE 1/4, NE 1/4, Section 8, T104N, R71W, however this is not within the designated survey area. The temporal nature of this site is not known to this author and if this project should expand to include this area then more research of this site should be conducted.

Recommendations

No cultural resources were found and no further work is necessary within the survey area. If the project expands into areas not included in this survey then additional measures will be necessary. If cultural resources are unearthed during any excavation work the State Archaeologist should be notified.



Chapter Seven

EVALUATION OF 39LM253

LITERATURE SEARCH

A literature search was conducted for 39LM253 which included the South Dakota County Site Files, several published and unpublished reports, as well as the State Master Site Quadrangle Maps. The site was originally recorded by Oscar L. Mallory, of the Smithsonian River Basin Surveys, on September 9, 1964. The original site form indicated that the site was a "camp or village" located "on a terrace spur directly across the river from the town of Chamberlain". Site size was given as 50 by 50 yards, with the cultural zone "about 1.5 ft. below the present ground surface". The surface stratum was "under cultivation at present". Material observed included "a few minuscule pottery sherds, bone fragments and stone chips eroding from the bank". The legal location was given as SW 1/4, SW 1/4, Section 4, T104N, R71W. The approach to the site stated "Site is about 1/2 mile north of the Chamberlain Recreation Area". A sketch map accompanying the site form (Figure 3) has minimal information. No scale is given. If the map is supposed to represent a complete section, then the site is mislocated as being situated in the NE 1/4 of Section 4, T104N, R71W. If the map represents a quarter section then the site is located in the NE 1/4, SW 1/4 of Section 4, T104N, R71W. If the map represents the SW 1/4, SW 1/4, of Section 4, T104N, R71W, then the site is located in the NE 1/4 of this quarter-quarter section. The site delineation (cross-hatching) does not indicate that the site is contiguous with a river? drainage? bank. It appears that the site is more than a few yards from the reservoir edge (based on an estimate of scale from the 50 by 50 yard site size). If Mallory saw cultural material eroding out at a depth of 1.5 ft he gives no indication of where or along which bank this material was located. The recommendation given by Mallory, as stated on the site form, is for no further work.

In his report of 1965, Mallory refers to 39LM253 on several occasions. The first reference appears on page two where he states:

...only two new west side sites, 39LM251 and 39LM253, were found.
Site 39LM253 does not have excavatable material...

On page 25 Mallory describes the site as:

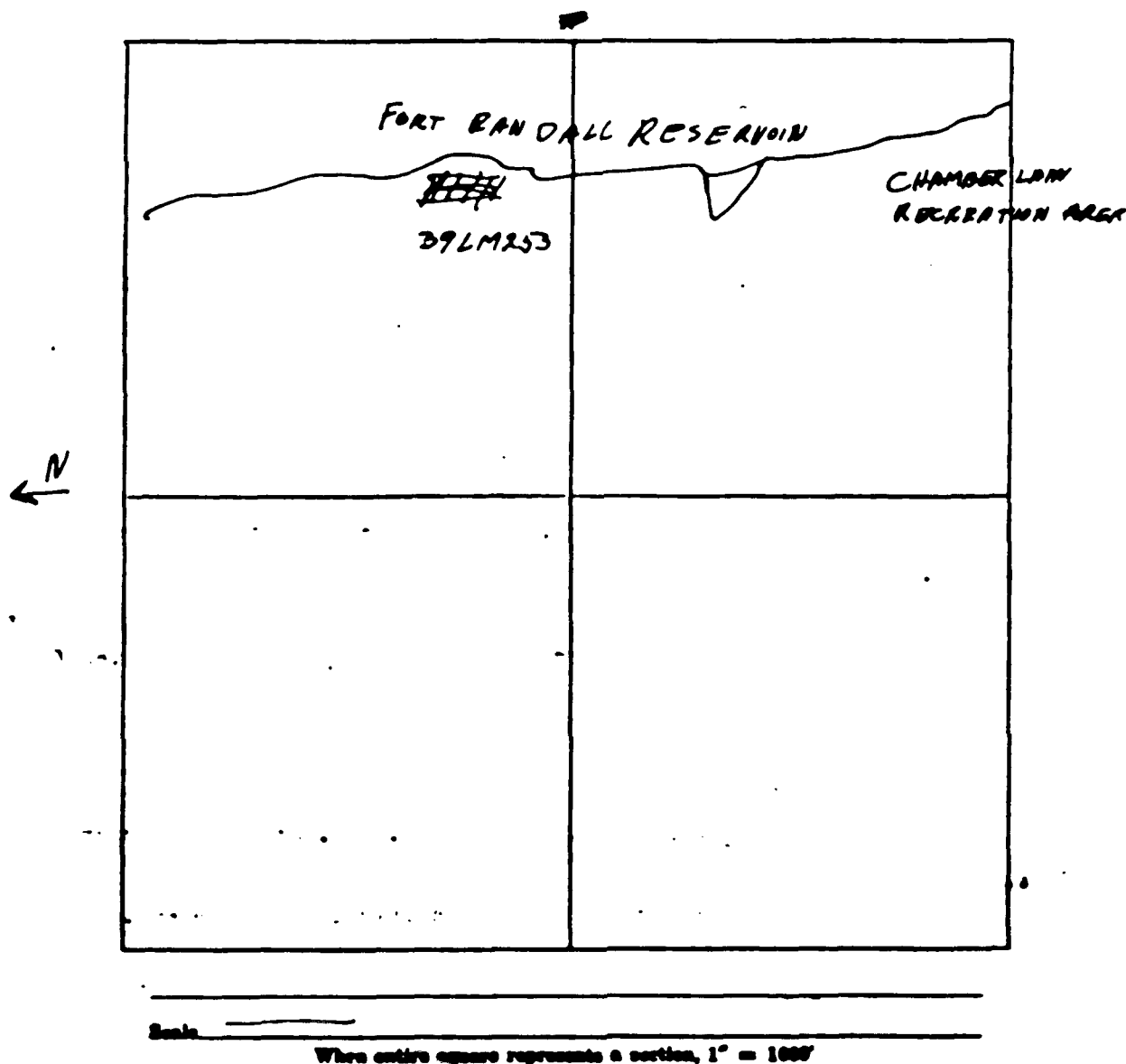
"A small find location of a narrow terrace spur across the river from the town of Chamberlain (plate 3a). No materials that would warrant further work were observed nor was enough material collected from the surface to suggest cultural connections."

Mallory's Table 1, which is a summary of sites examined with a priority listing and

R3

3

Site No. 39LM253 Mapped by Mallory Date 9-9-64



22. Approach to site: Site is about 1/2 mile north of the Chamberlain Recreation area.

FIGURE 3
Oscar Mallory's 1964 Site Map.

23. Remarks:

comments states on page 31:

Priority	Comments
C	Thin, sparse deposits of unknown cultural affiliation. No further work recommended.

It should appear obvious to the reader, as it is to the author, that the site location was poorly documented and the site could, based on the site form, lie anywhere within the forty acres included in the SW 1/4, SW 1/4, Section 4, T104N, R71W. Fortunately, several photographs of the site area were included in Mallory's report and in the site form, which, as discussed later in this chapter, may be the key to relocating the actual site area. The next reference to site 39LM253 appears in Winham (1984). This reconnaissance survey of the west bank of Lake Francis Case included parts of the NE 1/4 and the SE 1/4 of SW 1/4 of Section 4, T104N, R71W. Winham states in his abridged notes (1984:Support Documentation:C.5) that:

"Shovel tested area near known site 39LM253, but nothing located within Corps boundary".

In Winham's (1984:85) table 5.1 (Sites Identified by the Literature Search as having been Recorded (numbered) but not Relocated During the 1983 Field Survey) under location he states:

"Apparently (39LM253) lies just west of a road marking the boundary of the project area. Shovel test east of the road revealed nothing".

The assumption that the site may lie just west of the Corps boundary led to the placement of a "previously recorded site not relocated during the survey" (Winham 1984:Appendix A) key designation (Winham 1984:Figure A.6) on a small finger ridge in the NE 1/4, SW 1/4, SW 1/4 of Section 4, T104N, R71W. The reasoning behind locating the site specifically on this topographic setting is not stated by Winham. Perhaps the site location was relegated to this position to show that the site must lie outside of their survey zone or perhaps it was the most likely "fit" considering the meager descriptions and poor documentation supplied by Mallory. If indeed the placement of the site, as shown in Winham's Figure A.6, represents an educated guess or is based on some other facts, a statement to that effect would have been worthwhile to have been presented somewhere in the 1984 report.

FIELD WORK

On August 22, 1989, the search began for 39LM253. Considering what data was available at this time it seemed the best approach would be to resurvey the entire shoreline of the proposed impact area of the River Ranch Project. All exposed wave-cut banks were examined. This resurvey began at the northern edge of the present Chamberlain Recreation area and was continued northward to the south side of a large, unnamed intermittent drainage which empties into the reservoir in the SW 1/4, NE 1/4, SW 1/4, Section 4, T104N, R71W. This included areas further north than the proposed River Ranch Project

impact area, at this stage of the development. No prehistoric or protohistoric artifacts were found. Historic cultural material from 39LM200 was found strewn along the shoreline (See Chapter Eight). In addition to the shoreline and wave-cut bank survey, all road cuts and other exposures were checked within 50 m of the present wave-cut banks. No prehistoric or protohistoric cultural material was found.

At the furthest northern point of the proposed resort impact area (an area which seemed to be the best possibility within the project area, based on Mallory's site photo, to contain 39LM253) the wave-cut bank was scraped for a distance of 20 m using shovels and trowels. It was hoped that if this area did indeed contain 39LM253, that cultural material may be exposed. No cultural material was found. As a backup measure, twelve auger probes (three rows of four probes each) were placed at 10 m intervals, east to west, starting at the edge of the wave-cut bank (Figure 4). Depth of the auger probes reached a maximum of 60 cm which is well into and below Mallory's estimate of 1.5 ft (46 cm). The excavated matrix was screened through 1/4 inch mesh. No cultural materials or indications of features were found.

The next step was to check the area where the 1983 survey had placed the site (Winham 1984). A survey of the area was undertaken with individuals placed at 5 m intervals. No cultural material was found. A subsurface investigation was conducted using auger probes placed 10 m apart, running north to south, with every fifth probe station shovel tested. Shovel tests were used as this allowed for a more detailed view of the soil horizons. The auger probes were excavated to a maximum depth of 50 cm (1.5 ft) and the shovel probes were 30 cm square by 50 cm maximum depth. All excavated material was screened through 1/4 inch mesh. No cultural material was found. It also was evident from the difficulty of removing the soil, as well as the undisturbed soil horizons, that this particular plot of land had likely never been plowed. In addition, the distance of this location from the present erosional edge of the reservoir placed is 200 m west. Mallory's site and report photograph indicate that the site is substantially closer than this to the reservoir edge. Based on the evidence gathered it was determined that the Winham et al (1984) location does not contain materials from 39LM253.

All evidence at this point indicated that the site was not located within the proposed River Ranch Resort Project area. A closer look at Mallory's original (un-xeroxed) site photo faintly revealed a radio/microwave tower located on the east side of the reservoir, just north of the city of Chamberlain. A similar tower, located in approximately the same place, was visible from the project area. An examination of the USGS 7.5 Minute Series Chamberlain Quadrangle Map (1974) clearly indicated the location of the tower (labeled radio tower on the map). The tower is located in the NW 1/4, NW 1/4, NE 1/4 of Section 11, T104N, R71W. If this tower is the same as the tower shown in Mallory's site photo, then there was the possibility of lining up the original site photo with present day photos and determining the location of the site.

In order to determine if the towers were the same, it was necessary to find out when the microwave tower was built. A call was placed to Northwestern Bell's office in Winner, South Dakota. A Mr. Ed Jensen, the manager of the area which included the tower, was contacted and asked to assist us in determining when the tower was erected. Mr. Jensen said his company's record indicated that the tower was **on line** (in use) as of April 6, 1965. If the tower was operational by April, 1965, it is a safe assumption that the tower was under construction at some point prior to this date. It would also be reasonable to assume that the process of building such a structure would take more than a few months. Considering

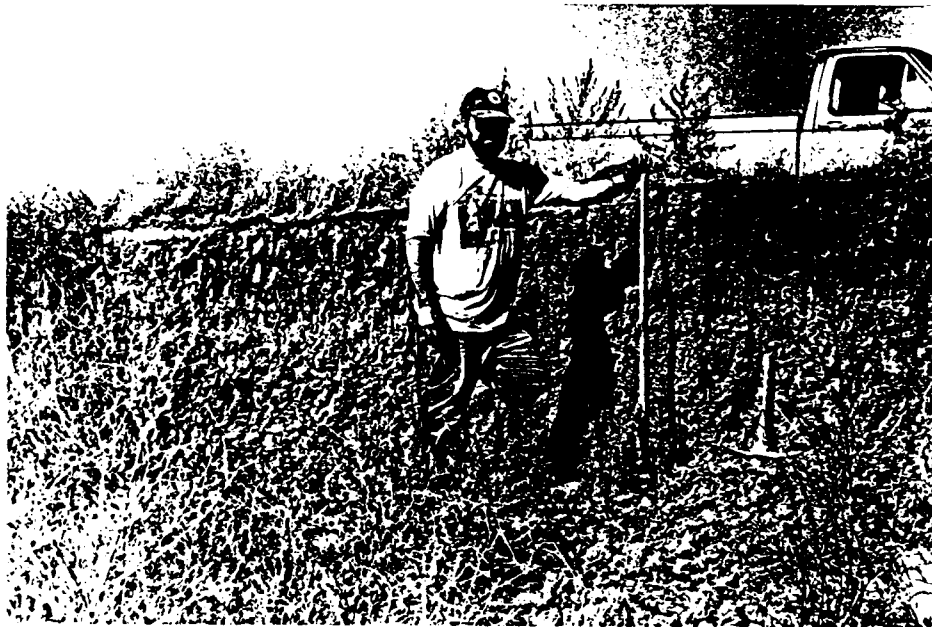


FIGURE 4

Upper: View of west wave-cut bank profile.
Lower: View of auger probing, looking southeast.

the climate of this region in the winter time, it is unlikely that construction activities relating to the actual erection took place during the mid-winter months. It would seem logical to have the tower up before inclement winter weather set in. This would allow for the indoor work necessary to have the tower operational by spring. In addition to this, there is no evidence that another tower existed in this area before or since Mallory's survey.

Mallory's site photo was taken on or near September 9, 1964, the date the site form indicates the site was recorded. It is also a reasonable assumption that the tower seen in Mallory's photo is the same tower that stands today.

Applying the foregoing information and assumption, it was now possible to find topographic features within the photograph and match them up with the same features that exist today. Several courses of action were involved to help verify this. The first was to take a series of photographs, looking in the same direction as Mallory, of the terrain which is seen in the earlier photographs. The first series of photographs were taken from the northern most point of the project area. This, as mentioned earlier, seem to be the best fit for the possible site area within the project domain. The second set of photos was taken at points further north than this, outside the project domain. (Note: It was obvious from the original photo that the topographic features, which aligned themselves with the tower, present were not to the south of the first series of photographs taken). The next course of action was to align the tower, as seen in each series of photographs, with topographic features that matched on the USGS map. Once this was accomplished a line was drawn on the quad map, from the tower, through the topographic features, ending up at the point of origin of the photograph. Every line drawn in this matter accurately lined up with the spot from which the photograph was taken. Eventually, a photograph was found that best matched that taken by Mallory in 1964. A line was then drawn from the tower to the point of origin of this photo, along with Mallory's original, the results being the following:

- 1) The site origin of both photos matched and this placed the site in the SE 1/4, NE 1/4, SW 1/4 of Section 4, T104N, R71W.
- 2) This puts the site at or near the same location as 39LM168, a site recorded by Winham in 1984.

These data indicate that 39LM168 and 39LM253 are the same site.

Some additional evidence is available which may strengthen the position that the two sites are one in the same. Mallory's sketch map, as pointed out earlier in this chapter, does not indicate whether it is representing a full land section or a quarter section, etc. If it represents a quarter section, then the positioning given would place the site in the SE 1/4, NE 1/4, SW 1/4, Section 4, T104N, R71W. This would be a correct legal location for 39LM168. The only legal location given by Mallory is on the site form. It is possible that an extra SW 1/4 was inadvertently typed onto the site form. The sketch map also shows a drainage to the south of the site area. There is a large, intermittent drainage directly south of 39LM168.

Mallory's description of the site being situated on a "terrace spur" is obviously subjective. 39LM168 is located between two drainages that dissect a terrace which may, in Mallory's description represents a "spur" or protrusion.

Mallory states that the site is located "about 1/2 mile north of the Chamberlain Recreation area". "About" is hard to define in this context and also from what point of the

Recreation area does the mileage count begin? If Mallory used the north edge of the recreation area and "about" one-half mile represents some flexibility, this would put his site location reasonably close to 39LM168.

Both Mallory and Winham, to varying degrees, state that the land in question was probably cultivated at some point in the past. This fact makes this area a better "fit" for the site than that stated in the 1984 survey report.

The artifacts noted by Mallory included lithic material, bone fragments and pottery fragments. These are the same types of artifacts that were found on 39LM168 (a metal object was also found in the 1983 survey). Although these types of artifacts are well represented in sites throughout the area, the classes of artifacts found by both surveys, are similar.

Whether these two sites are one in the same may never be known. There is not enough accurate information given by Mallory to make a positive match. The photographic and circumstantial evidence supports the conclusion that 39LM168 and 39LM253 are the same site. Either way, it is clear that 39LM253, whether it is actually 39LM168 or not, does not lie within the current project boundaries represented in this report.

Recommendations

Based on the information presented above, 39LM253 was determined to be outside of the current project area. Consequently this project will not impact any cultural resources associated with the site. The evidence presented supports the conclusion that 39LM253 and 39LM168 could be the same site. However, until absolute evidence is obtained which clearly demonstrates that the sites are the same, both site numbers should be kept status quo. This conclusion will be clearly stated on the state site card on file at the State Archaeological Research Center for those investigators in the future who may reference the sites.

Chapter Eight

EVALUATION OF 39LM200

LITERATURE SEARCH

A review of the literature including the South Dakota County Site Files, the Lyman County Register of Deeds, the Brule County Register of Deeds, informant interviews, as well as published reports, was conducted to gather pertinent information concerning 39LM200. 39LM200 is an historic site located on the west bank of Lake Francis Case, north of the present Chamberlain Recreation Area.

The site was first recorded by Winham (1984) on July 7, 1983. Information from the County Site Files as well as Winham's report state that the site was an historic (ca. 1890-1920) farmstead, located on an undulating terrace that slopes slightly southeast, with drainages to the north and south. Site size was given as 100 m N-S by 35 m E-W. The condition of the site and the status of its integrity were given as:

"Close to lake cut bank, but not yet actively eroding away. Any structures/foundations have been deliberately destroyed and only depressions and mounds and a little rubbish remain" (Winham 1984:172).

Artifacts that were observed included a stove, bottles, metal fragments and a trash pile. None of these artifacts were collected.

Six separate features were plotted on the site map. The description of each were given by Winham (1984:172) and are as follows:

1. Cellar (5 x 3.5m excluding stairs)
2. Rectangular depression (5 x 3.5m)
3. Weed patch ? depression, much overgrown.
4. 1/2m diameter depression with rocks in it.
5. Disturbed area with rock, barbed wire, other debris.
6. Area of rubbish exposed in cut bank.

The results of the literature search conducted for the 1984 report states:

"Mr. and Mrs. Bahr (local informants) said Peter Rutan, his wife and three children (2 of whom were named Eva and Jessie) built and lived in this house from ca. 1890-1940s. "Peter Rutan" is associated with a building shown on the GLO map lying 1/4+ mile east of this building. The name "Marvin" is associated with this site (39LM200). Peter Rutan is shown owning the land inclusive on the 1911 Ogle map, but no buildings are shown near 39LM200, while a building is shown near Peter Rutan's building shown on the GLO map.

1st owner - Alfred Peter Rutan - Document: Patent (Homestead), Oct. 13, 1901" (p. 172).

In his summary, recommendations and research potential section Winham states:

"The site is probably a homestead, using the term in its non-specific definition. Rectangular depressions, cellar, remnants of foundations, disturbed topsoil, and rubbish tip are all obvious indications of such. Nothing evident to mark the site as unusual, diagnostic, or in need of further research. No age estimate possible. The site is not eligible for nomination to the National Register of Historic Places" (p.172-3).

Records in the Lyman County Register of Deeds office, the Brule County Courthouse records, as well as several County History books, supported the data presented in the initial survey report of 1984. Additional evidence which adds to the ownership chronology of the site was available through the records at the Register of Deeds, Lyman County. As stated by Winham (1984) the site was originally homesteaded by an Alfred Peter Rutan, securing the patent October 31, 1901. On August 25, 1933, the Rutans sold a strip of land containing approximately 5.571 acres for a public right of way in Section 9, T104N, R71W. After Peter Rutan's death in 1945, his final decree willed the land to his widow, Lena, and to his two daughters and one son. This officially occurred on July 30, 1947. On August 13, 1949, the family of Alfred Peter Rutan sold the property to George Deiss of Chamberlain, for \$3,200.00. The United States of America took the land involved with this site as well as thousands of additional acres through condemnation in 1952. No additional documentation of the land involved with 39LM200 was found. However, a chance meeting of one of the descendants of Alfred Peter Rutan led to some clarification and additional history of the site. The information gathered from the informant is presented below.

On the morning of August 25, 1989, a Mr. Robert Rutan was at the location of 39LM200. Mr. Rutan introduced himself and discussions began concerning the site and his knowledge of the area. Unfortunately, a heavy rain shower was in progress and the project crew was in the process of heading back to the home station, so any in depth discussion would have to be held at a later date.

On August 29, 1989, the author met with Mr. Robert Rutan in Chamberlain. Mr. Rutan stated that Alfred Peter Rutan was his great uncle. Mr. Rutan was adopted by Carl Rutan, a nephew of A. Peter Rutan. Carl Rutan's wife was Frances. This action occurred as Mr. Robert Rutan's mother died at childbirth. Robert was left in the custody of the doctor who was instructed by the mother prior to her death that if something did happen she wanted Robert to go to the Rutans.

As the story goes, Alfred Peter Rutan and his brother John, came out west from Pennsylvania. The brothers either brought their wives with them or married local women. Alfred Peter Rutan's wife was named Lena. John Rutan's wife was named Caroline. The location of John and Caroline's home was not mentioned. Alfred and Lena homesteaded the property involved in this study, as stated above. Lena gave birth to three children. One boy, named William, and two girls, named Eva and Jessie. Apparently another child was born at some point but died at birth. The Rutans constructed a one room house, with one door and one window. According to Robert this part of the site has eroded into the

reservoir. Water was hauled from a shallow well located on the river bottom land. The family had some cattle and a saddle horse. No crop other than some hay was raised for feeding the livestock. A big garden was planted each year for obvious reasons. A corral, consisting of a wooden windbreak, was located to the southwest of the house. This would correspond to Feature 3. Being the opportunists that all survivors of this time period were, the Rutans added to their house when they spotted a small shack floating down the river. The shack was pulled to shore and added onto the west wall of the house. This was the extent of any real buildings on the property throughout its history.

John and Alfred built their own rowboats from cedar. They would fish the Missouri down to the Niobrara, just at the time the catfish would start migrating down the Niobrara to the Missouri. They were apparently good fishermen and had secured buyers for their catches up and down the river. In addition to fishing, Alfred had willow traps and set lines, taking advantage of what local wildlife was left. According to Robert, no deer, antelope or bison were present in the area during the early times. Rabbits, ducks, geese and grouse were plentiful. Rattlesnakes were around also and one of the two girls was bitten by one. She survived, perhaps in part due to a half-chicken poultice applied to the wound. Perhaps as entertainment but more so for deterrence, Alfred would sit on a high point overlooking his trap lines and using his Sharps buffalo gun, fire rounds at anyone trying to abscond with what was not rightly theirs. Mr. Robert Rutan was also very candid about the interest in certain types of liquid refreshments often consumed by Alfred, namely beer, wine and whiskey. This may account for the number of such bottles found in Feature 2.

Alfred Peter Rutan was born on March 31, 1861. He lived on the property until November 2, 1945, when he was killed in a car accident. His wife moved to Los Angeles with one of the daughters. She died in California on June 8, 1951, but was buried next to her husband at Chamberlain. John Thomas Rutan, Alfred's brother, was born in 1855 and died in 1919. His wife Caroline was born in 1859 and died in 1906. Robert's father, Carl was born November, 17, 1892 and died February 22, 1966. Carl's wife, Frances was born on February 23, 1895 and died April 19, 1988. They are all buried in Chamberlain.

As far as the physical layout of the home area, Robert wasn't sure exactly where the privy or the root cellar were located. He did not have any problem with our interpretation of the location of the root cellar or the privy. He did not think that the area designated Feature 4 and 5 were anything in particular, as far as actual designated use areas, etc. The information graciously provided by Mr. Robert Rutan corresponds well with the documentation acquired during the literature search. Having some personal insights into the people and events that were involved with this site makes not only for a more accurate account of the physical remains, but increases one's awareness of the life and ways of early pioneers.

FIELD WORK

On August 23, 1989, during a survey to locate 39LM253, historic artifacts were found along the shoreline. These artifacts were associated with the site located on the bank to the west of the shoreline, this being 39LM200. 39LM200 was relocated on the same day and work began to document the site. The first order of business was to relocate the six features recorded in the 1983 survey and to see if any additional features were present that

had not been found in the initial recording of the site. A survey of the site area was conducted using individuals spaced at 5 m intervals. No additional features were found, however this procedure helped establish the site's horizontal extent (Figure 5).

Having established the horizontal boundaries of the site and relocating the six features, a baseline was established for placement of excavation units within each feature. A baseline running north to south at 12 degrees east of magnetic north allowed for the transect of five of the six features. One feature was east of the other five but was tied in to the baseline. The 1983 survey had numbered the features as they were found. The features were renumbered in an ordinal north-south sequence. This renumbering produced the following correlations:

Feature 1-1983 now Feature 1-1989
Feature 2-1983 now Feature 3-1989
Feature 3-1983 now Feature 5-1989
Feature 4-1983 now Feature 2-1989
Feature 5-1983 now Feature 4-1989
Feature 6-1983 now Feature 6-1989

The excavation units were numbered to match the feature number (e.g. Excavation Unit 1 was placed in Feature 1, etc). As stated in the scope of work each excavation unit was dug to a minimum of 40 cm below datum or deeper if warranted. All of the soil matrix removed from each unit was screened through 1/4 inch mesh. All recovered cultural material was bagged according to the level in which it was located. After completion of the excavation of each unit at least one wall of the unit was profiled and each soil horizon was described. Photographs were taken of all phases of the investigation including a photo of each excavation unit wall profiled. The site was mapped using a plane table and alidade. A description of the features and associated artifacts along with an evaluation of each feature is presented below.

As an archeological entity, this site consists of a concentration of six features, which are briefly described as:

Feature 1 (formerly F.1): a cellar that measures 5 by 3.5 m excluding the stair well.
Feature 2 (formerly F.4): a 1.5 m diameter depression with a rock in it.
Feature 3 (formerly F.2): a rectangular depression measuring 3.5 by 5 m.
Feature 4 (formerly F.5): a disturbed area with rock, barbed wire, and other debris observed on the surface.
Feature 5 (formerly F.3): a weed patch (depression), which was much overgrown.
Feature 6 (formerly F.6): an area of rubbish exposed in the cutbank of Lake Francis Case.

The following discussion will present Dr. Lee's analysis of artifacts found in these various site contexts.

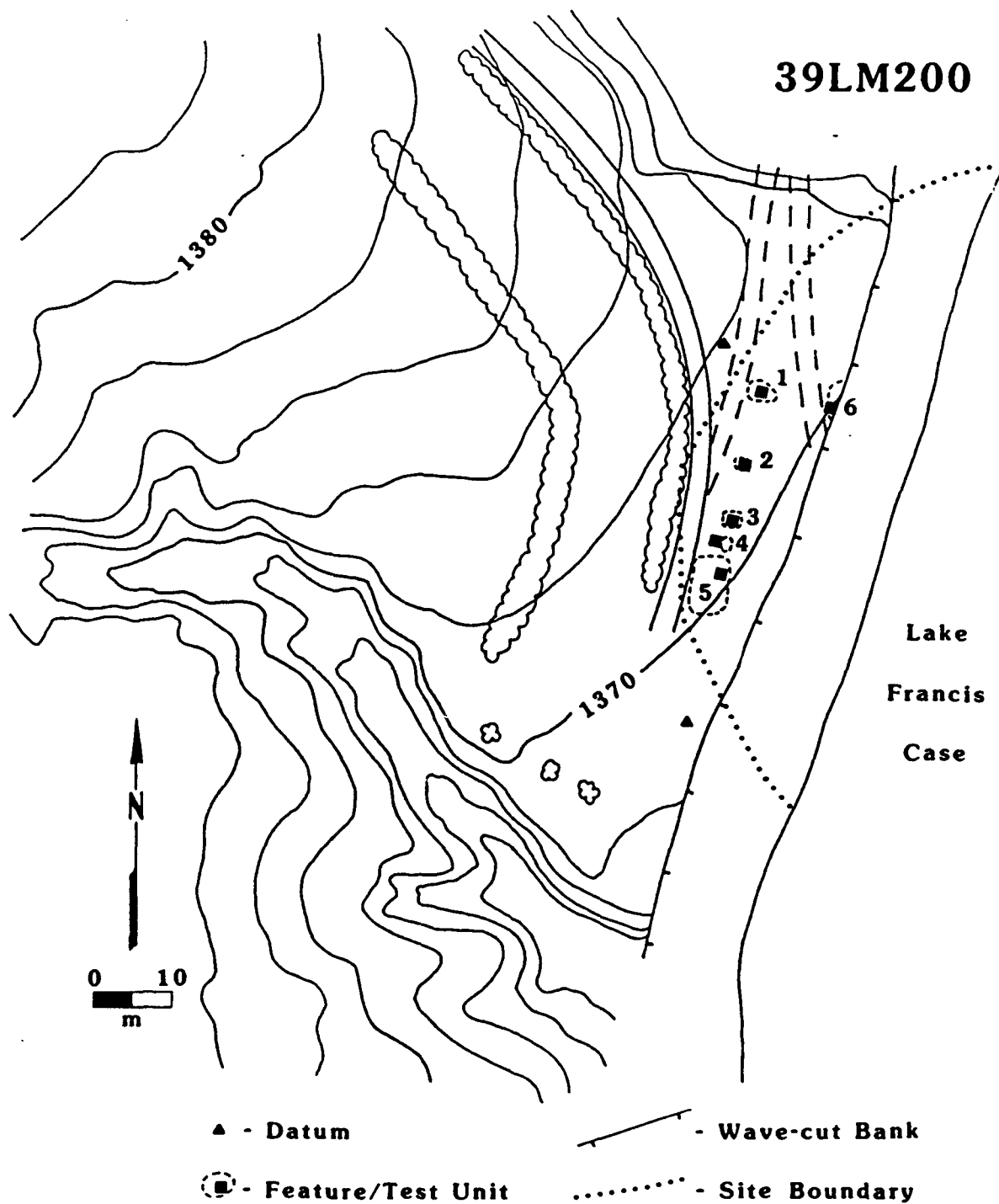


FIGURE 5
Plan view of test excavations at 39LM200.

Artifact Analysis and Feature Interpretation

Excavation Unit 1 (Feature 1)

Feature 1 is a cellar which measures 3.5 m by 5 m in size excluding the stairwell. This feature was interpreted as a root cellar based on field observations. A 1x1 m test pit was excavated to a depth of 60 cm in six 10 cm levels (Figure 6). No artifacts were collected from the first four levels (0 to 40 cm); the only artifacts encountered were very recent and were not collected.

Level 5 (40-50 cm)

Bottle glass Two fragments of slightly solarized bottle glass were recovered from this level. These both appear to be from the body portion of bottles. Solarized glass has turned a light shade of amethyst due to exposure to the ultraviolet radiation from sunlight, which affects manganese present in the glass. The manganese was added as a clearing agent starting in 1885 and was replaced with other agents when supply was cut off during World War I. The fact that these originally colorless fragments have been solarized thus indicates that they were manufactured between about 1885 and 1915 (Munsey 1970).

Flat glass A single fragment of flat glass, probably window glass, was found. This has a slight aqua tint and measures .89 in (2.4 mm) in thickness. This is a fragment of the corner of a square or rectangular sheet of glass.

Nails The upper shank and common head to a relatively large machine cut nail was found in this level. Machine cut nails are characteristic of the 19th century. For all practical purposes, these nails were replaced by wire nails by about 1900 (Fontana and Greenleaf 1962:44-66).

Shingle Two small pieces of what appears to be tar shingles or shingle underlayment were identified in the artifacts from this level.

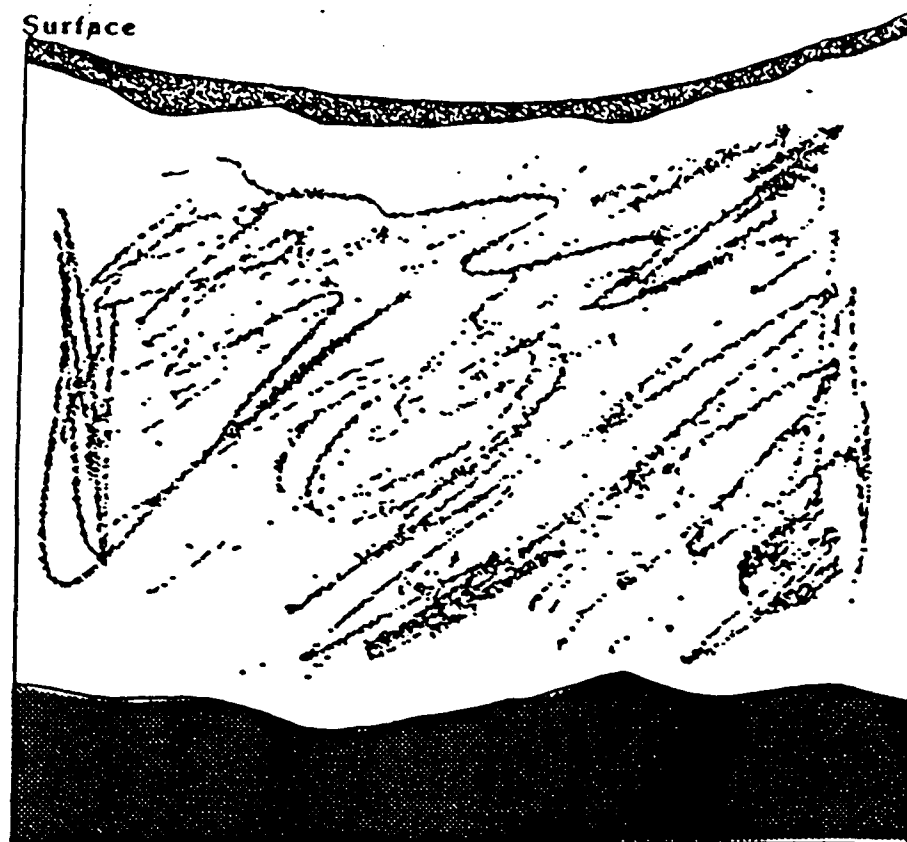
Bone Six bones or bone fragments were found in this level, and most of these appeared to be identifiable elements, probably from birds. No attempt was made to identify these bones by element or species.

Level 6 (50-60 cm)




Bottle glass A total of 21 fragments of bottle glass came from this level. These include 14 fragments from an amber bottle and another 7 from a colorless glass bottle.

The 14 fragments of amber glass are from a single early disposable beer bottle manufactured by a fully automatic process. This has a simplified crown type finish. The shoulder of this bottle is embossed with:

NOT TO BE REFILLED



0 20cm

-  Yellowish Brown Silty Clay with Shale Concretions
-  Mixed Feature Fill
-  Brown Clay with Shale Concretions

North Wall

FIGURE 6
Soil profile of excavation unit 1.
39LM200

on one side and with:

...RETURN

on the other. "RETURN" is without doubt part of the slogan "NO DEPOSIT - NO RETURN." No refill beer bottles embossed with this slogan were first introduced in 1939 (Kroll 1976:7).

The base of this bottle is represented by only two small fragments. It is embossed with "-30 EXP."

The seven fragments of colorless glass are from a bottle with flat chamfered corners. Several of these pieces articulate, and it is probable that all are from the same bottle. None of these are, however, particularly diagnostic.

Nails Four very corroded nails were found in this unit. These include one common head machine cut nail that measures 2 7/8 in (7 cm) in length and which is not bent, a bent common head wire nail 4.5 in (11.4 cm) long, and an unbent common head wire nail 5.75 in (14.6 cm) in length. The single fragment is the shank of a wire nail; it has an acute bend at its mid-section. Wire nails were introduced in about 1886 and between that year and 1900 shared the market with machine cut nails. After about 1900, however, wire nails effectively replaced cut nails on the market (Fontana and Greenleaf 1962:44-66).

Bone The tooth from an unidentified animal, probably horse or cattle, was found in this level. Also present was a small, nondiagnostic fragment of bone which has been severely burned.

Wire Two pieces of heavily corroded wire of different gauges were observed in the collection. These are severely bent. The use of these artifacts is unknown.

Feature 1 Discussion

The test pit excavated into Feature 1 contained a relatively small amount of material. In examining this material, two important points are immediately apparent. First, this material was apparently buried beneath 40 cm of relatively sterile soil, although some "recent" trash was present and was not collected from this level. Second, the artifacts from the 40 to 60 cm level (Levels 5 and 6) include several relatively early artifacts in contextual association with artifacts from a much more recent period. The early artifacts include 19th century nails, which admittedly could have remained in use until the abandonment of the site, and solarized glass, dating from the 1885 to 1915 period. The recent artifacts include wire nails, which could date as early as 1885 but which are still in use today, and an obviously recent "no deposit-no return" beer bottle dating from after 1939.

This mixture of materials, and in particular the presence of the recent beer bottle, indicates either a very recent filling of this feature or a serious disturbance of this feature in the recent past. In either event, this makes it difficult to develop a functional interpretation of this feature based on the artifact information and it indicates that this feature has either little integrity of preservation or little archeological significance because of its recent age (i.e., it is less than 50 years old).

Excavation Unit 2 (Feature 2)

This feature was recognized on the surface as a depression that was 1.5 m in diameter and contained a rock. Levels 1 and 2 of this unit were apparently devoid of artifacts; a large piece of sheet metal was exposed but extended well into the unit walls and was not removed. Levels 1 through 4 were 1 m on a side, but below this only the southeast quarter of the unit was excavated. Excavation extended 10 levels to a depth of 1 m, but the feature extended only to about 95 cm (Figure 7). No artifacts were found in Level 10. This feature was interpreted as a privy in the field.

Level 3 (20-30 cm)

Bottle glass A small, nondiagnostic fragment of colorless bottle glass was found in this level.

Nails A single nail comes from this level. This is a common cut wire nail that has angular bends in two places; one bend is close to 90 degrees. The nail is approximately 2 to 2.25 in (5 to 5.7 cm) in length. Wire nails were introduced in about 1886 and are still in common use today.

Wire Two pieces of wire are represented. The first is a section of small gauge iron wire, probably baling wire. The second is a section of double strand barb wire with a wound wire, single point barb. Attached to this is a section of twisted, small gauge iron wire which is probably baling wire.

Strap iron One section of thin iron strap was found in this level. This strap is .75 in (1.9 cm) in width and is perforated with an angular hole that probably resulted from the passage of a machine cut nail through the strap.

Unidentified iron This is a piece of iron of unknown function. It has parallel sides but is curved and is thicker at one end than the other. One corner has a perforation in it.

Level 4 (30-40 cm)

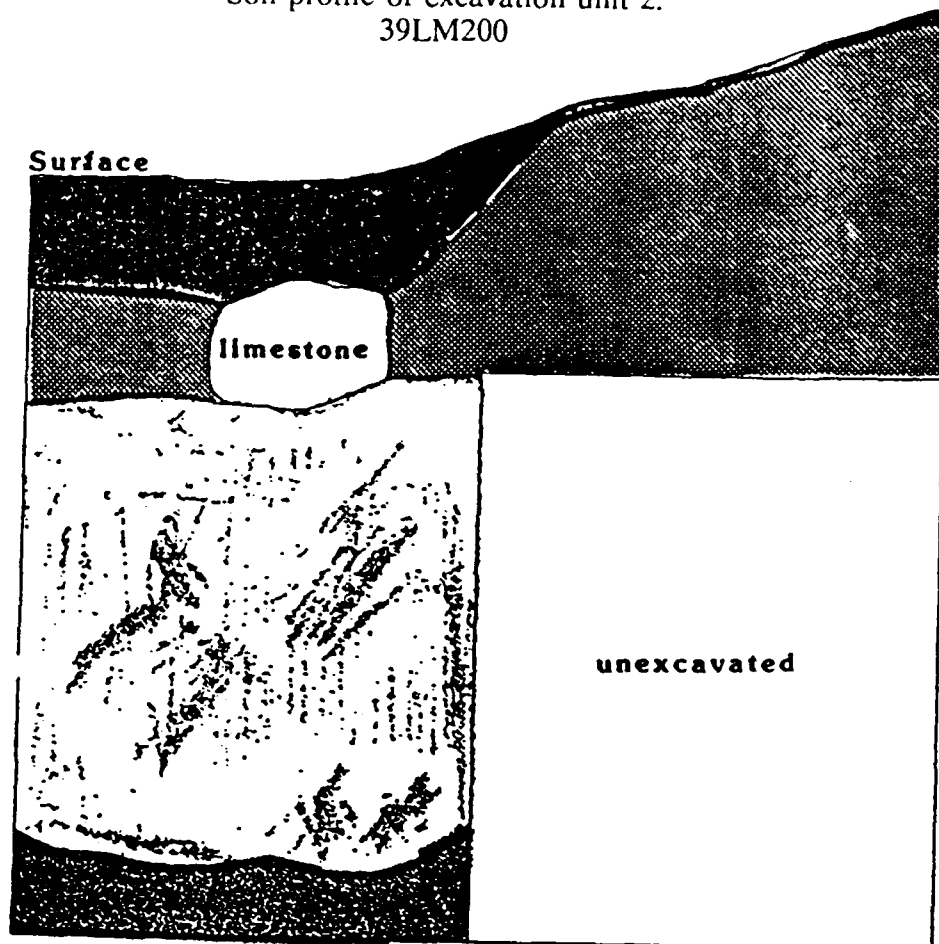
Bottle glass Eleven sherds of clear bottle glass are included in the collection from this level. Ten of these are nondiagnostic body fragments of relatively small size. The last sherd is the lower part of the body of a bottle of undetermined form, but which is embossed with "QUA" (quart) in .25 in (.63 cm) high letters.

Chimney glass One very thin fragment of clear glass from this level is interpreted as the fragment to a glass chimney from a lamp.





Ceramics One sherd of undecorated whiteware was found. This is a section of the base of what was probably a plate; the sherd includes a portion of a foot ring.

Nails Three complete nails and one nail fragment were found in this level. These included one fragment of the tip to a machine cut nail, a relatively straight common head

FIGURE 7
Soil profile of excavation unit 2.
39LM200



0 20cm

-  Dark Grayish Brown Silty Clay
-  Brown Clayey Silt with Shale Concretions
-  Mixed Feature Fill
-  Light Yellowish Brown Clay with Shale Concretions

North Wall
39

machine cut nail with a length of 2.25 in (5.7 cm), a common head wire nail with a slight angular bend and with a length of 2 in (5 cm), and a common head wire nail with an angular bend and a length of 2.25 in (5.7 cm).

Wire One fragment of iron wire, probably baling wire, was found in this level.

Bone Five fragments of unidentifiable bone scrap were examined from this level. no attempt was made to identify these specimens as to species or element.

Level 5 - 6 (40-60 cm)

Bottle glass Several complete bottles and several bottle fragments were found in this level. The complete bottles include two 4/5 quart amber bottles, two colorless glass wine flasks, and two amber glass flasks which once held alcohol.

The first 4/5 quart amber glass bottle has been manufactured by an automated manufacturing process which clearly places its manufacture within the 20th century. It is approximately 11.25 in (18.5 cm) in height and has a body diameter of about 3.0 in (7.6 cm). It has an externally threaded finish for a continuous thread closure, and a metal screw cap is still present on the bottle. Below the finish, the neck is bulged and the shoulders are rounded. The body is circular in cross section and is cylindrical in general shape. It has a very shallow, concave base. The only embossing on this bottle is on the body and on the base. The embossing on the body is found within .5 in (1.3 cm) of the resting point and consists of a repeating message which encircles the body and which reads "4/5 QUART 4/5 QUART 4/5 QUART 4/5 QUART" in letters that are about 5/8 in (1.57 cm) high. The base is embossed:

666
LM
10

The "LM" is interlocking and forms a distinctive device which is identifiable as the mark of the Latchford-Marble Glass Company of Los Angeles, California. The Latchford Glass Company became the Latchford-Marble Glass Company in 1939 on the death of its founder W.J. Latchford. In 1957, W. Baird Marble died, and the name of this company was changed back to the Latchford Glass Company. The interlocking "LM" device was thus in use during the period 1939 to 1957 (Toulouse 1971:332-333).

Roughly identical to this bottle is another with a somewhat lighter amber color and slightly different proportions. The embossing on the lower base of this bottle (repeating "4/5 QUART") is also slightly different, and base is embossed with:

1725-B-L
MG 46
57

Each element of this basal embossing is enclosed within a square or rectangle, depending on its length. The MG is stylized. MG is a mark of the Maywood Glass Company of Compton, California. This Company was in business between 1930 and 1961 and the

particular logo found on this specimen was in use in ca. 1958 (Toulouse 1971:357-360). Two colorless glass flasks were found in this level. Both were made using an automated manufacturing technology, indicating a 20th century date. They are 8.12 in (20.6 cm) in height and have finishes with external threads designed as part of a continuous thread closure. Both specimens have screw caps present; one is made of aluminum and the other of iron. Below the finish, the neck is tapered and the shoulders are sloped down. The body is an elongate oval in cross section, representing a flask form. This bottle is embossed on the body and on the base. On the body, embossing is restricted to an area within .5 in (1.3 cm) of the resting point, and consists of the words "ONE PINT" .25 in (.63 cm) in tall letters on each side of the body. On the base, the word "WINE" is found in the center in 3/8 in (.93 cm) tall letters. To the left of the word wine is a maker's device with a number on each side (7 and 7 on one specimen, 7 and 6 on the other). The maker's device is not very distinct, but includes an oval and diamond superimposed over one another. This is probably the mark of the Owens-Illinois Glass Company that was in use from the founding of the company in 1929 until 1954, when another mark was adopted (Toulouse 1971:403-404).

Two identical, small bottles are included in the collection. These are flasks of amber glass. They have external threads for a continuous thread closure; each has brown painted aluminum screw caps still attached. Around the upper body just below the shoulders is embossed "FEDERAL LAW FORBIDS SALE OR RE-USE OF THIS BOTTLE" in 3/16 in (.47 cm) high letters. On the lower portion of the body within .5 in (1.3 cm) of the resting point, and present on both sides of the body, are the words "ONE PINT" in .25 in (.63 cm) high letters (Plate 1,a). The base of both are embossed with:

TMC 8 D 126 47
B

The TMC is a stylized device which is the mark of the Thatcher Manufacturing Company (1900-1946) and the Thatcher Glass Manufacturing Company (since 1946) of Elmira, New York. Although this mark has been used since 1900, for many decades this company specialized in the manufacture of milk bottles. More useful in dating this bottle is the slogan, "Federal Law Forbids Sale or Re-Use of This Bottle," which firmly dates it to the period 1933 to 1964 (Munsey 1970:126).

The finish, neck, and shoulders of an amber glass bottle were also found in this level. This bottle is very similar in proportions to those described above, but certain details of the finish differ from these complete bottles. This bottle has a finish with exterior threads and has a green painted aluminum screw cap still in place. The form of this bottle is a flask. Around the upper part of the body and just below the shoulder can be seen remnants of the slogan "[fe]DERAL LAW F[orbids sale o[R RE-USE OF T[his bottle]" in letters that are 3/8 in (.93 cm) high. The slogan on this bottle dates its manufacture to the period 1933 to 1964 (Munsey 1970:126).

Six fragments of an amber glass bottle including diagnostic parts of the finish, neck, shoulders, body, and base were recovered from this level. It was in excess of 6.5 in (16.5 cm) in height. The finish on this bottle was a "Perry Davis Type" and the neck had a single neck ring. The body of this body is rectangular in cross section, and it has a recessed panel on each of its four sides and has chamfered corners.

This bottle was embossed on the two narrow panels; the embossing appears to have been

identical on these sides and said "EXTERNAL USE ONLY" in .25 in (.63 cm) high letters. The base of this bottle is relatively flat, and is embossed with "27" over an identical "27." The finish of this bottle appears to have been hand finished. This, and the lack of complex mold seams on this bottle suggests that this was made with technology that had become generally obsolete by about 1920 when the automatic bottle machines had seen widespread adoption. This bottle would thus appear to date somewhat earlier than others from this context, but this type of external medicine bottle may have enjoyed a long shelf life, both in a store and after consumer purchase (Plate 1,b).

Two small fragments of nondiagnostic clear bottle glass were also present.

Flat glass Five fragments of flat glass, probably from windows, were found in this level. These are all relatively thick, and measure .075 in (2 mm), .085 in (2.2 mm), .086 in (2.2 mm), .088 in (2.25 mm), and .097 in (2.3 mm).

Ceramics Two articulating sherds of a footed bowl are included with the material from this level. This deep bowl is made of undecorated whiteware. Its base bears no maker's mark.

Nails Included with the nails are a single iron staple and five complete nails. The round wire iron staple, probably used in fencing, is bent but measures about 1.5 in (3.8 cm) long. The nails are all common cut wire nails and include one straight nail 2 3/8 in (6 cm) long, one nail with a slight angular bend 2.5 in (6.3 cm) long, one nail with a sharp angular bend and about 2 in (5.1 cm) long, one nail with two sharp angular bends 4.5 in (11.4 cm) long, and one nail with a very slight angular bend and which measures 5 in (12.7 cm) long.

Lead tube The end to a lead tube complete with a lead cap was found in this level. The cap has octagonal facets, and the tube end is embossed "POISON" over a skull-and-cross-bones device. The specific contents of this tube are unknown.

Button A single two-hole, plano-convex button which appears to be made of slate or a material of similar composition is included here. This button measures 9/16 in (1.4 cm) in diameter.

Level 7 (60-70 cm)

Bottle glass The only artifact from this level is a complete glass bottle essentially identical to those described from Level 5-6. This amber bottle is embossed with a repetitive "4/5 QUART" message around its base. The basal embossing is impossible to read, but appears to include a device in the center and what appears to be a three digit number offset from the center. Because of the similarity of this bottle to those from Level 5-6 and because of the pattern of the embossing on the base, this bottle is thought to have been manufactured by the Latchford-Marble Glass Company between 1939 and 1957.

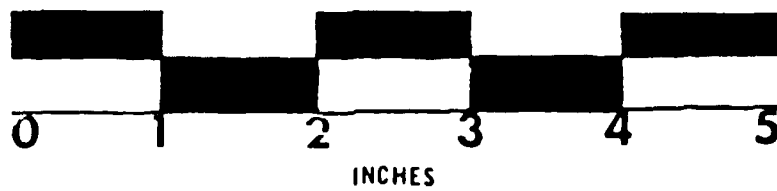


PLATE 1
Feature 1 Artifacts: a, amber glass flask; b, Perry Davis Type finish bottle.

Level 8 (80-90 cm)

Bottle glass Three nearly identical bottles were found in this level. Two of these were complete and one is a complete bottle that was broken in shipping. These are essentially identical to the Latchford-Marble bottles from Levels 5-6 and from Level 7. The basal embossing on these specimens is as follows:

- (1) "666" and "11" offset from center, interlocking "LM" device in center
- (2) Illegible numbers (?) offset from center, illegible embossing in center
- (3) "666" and "13" offset from center, interlocking "LM" in center. This specimen has a metal screw cap.

Although the basal embossing on one of the bottles from this level cannot be made out, the fact that it is identical--including the pattern of the basal embossing--to those carrying the "LM" device indicates it is also a Latchford-Marble bottle dating from the 1939 to 1957 period.

Nails The only nail from this level is heavily corroded but can be identified as a machine cut, common head nail. This nail is not bent, and measures 2.5 in (6.3 cm) in length.

Foil Two pieces of what appears to be aluminum foil were found in this level.

Level 9 (80-90 cm)

Bottle glass One complete bottle was found in this level; it is identical to the colorless flask-type wine bottles found in Level 5-6. As was determined for the Levels 5-6 specimens, this carries a indistinct but identifiable mark of the Owens-Illinois Glass Company that was in use from the founding of the company in 1929 until 1954 (Toulouse 1971:403-404).

Also from this unit are three sherds of bottle glass. These include one fragment of the lower part of the neck and part of the shoulder of an aqua glass bottle, an unidentifiable part of an aqua glass bottle, and a fragment of the lower part of the body and base of a clear glass bottle. None of these are particularly diagnostic.

Flat glass A single piece of thick, flat glass with an aqua tint was found in this level. This piece of glass measures .1 in (2.55 mm) in thickness.

Ceramics Four large sections of a single plate were found in Level 9. These articulate to form a complete plate with a diameter of 8.25 in (20.9 cm). This plate has a scalloped rim with an embossed decoration. The plate is further decorated with green and pink shading and with a polychrome floral decalcomania decoration. Decalcomania is a method of decoration which became extremely popular after about 1900 (Wegars and Carley 1982). As its name suggests, this relies on the application of decoration with decals, usually applied over the glaze. The base of this plate had a stamped maker's mark offset from its center. This greenish tint mark reads:

D.E. McNicol
East Liverpool, O.
XIT

This is a mark of the D.E. McNicol Pottery Company. This firm's East Liverpool, Ohio operation was established in 1919 and discontinued in 1928 (Gates and Ormerod 1982:185).

Feature 2 Discussion

Feature 2 extended to a depth of 95 cm below the surface, and was interpreted as a privy during the test excavations. Nothing in the artifacts would dispute such an interpretation; the only logical alternative for such a small and deep feature would be an intentionally dug trash pit. The trash content of this feature is not believed to be high enough to support such an identification. The interpretation of this feature as a privy is favored as the most logical explanation.

Based on the artifacts, several conclusions can be reached on the age of this feature and the process of its formation. Looking at the artifacts found in the cultural levels, and in particular levels 5 through 9, it would appear that this feature was filled rather quickly. Take for example the identical 4/5 quart bottles made by the Latchford-Marble and the Maywood Glass companies that are found in levels 5-6, 7, and 8, and the identical wine flasks made by the Owens-Illinois Company that are found in levels 5-6 and 9. The presence of these items throughout the fill of this feature indicates a stability in consumptive patterns of the inhabitants of this site as well as stability in the availability of these items on the local market. This would argue for the rapid filling of this feature and would suggest that this feature was associated with a single individual or family group.

The artifacts from this unit can also be used to argue for a very late filling of the feature although two artifacts could indicate an early date. These are a machine cut nail found in level 4 and a bottle found in level 5-6 that had a pre-1920, hand finished lip. The nail very obviously could have remained in use long after its ca. 1900 obsolescence and, as is explained above, the bottle may have had a long shelf life. Regardless of the age of these items, the evidence for a late date is overwhelming and comes largely from precisely dated glass bottles.

In levels 5-6, 7, 8, and 9, five bottles were manufactured between 1939 and 1957, three between 1929 and 1954, one from ca. 1958, and three from 1933 to 1964. Excluding the one bottle dated to ca. 1958, the period when these were all available was 1939 to 1954 (with a mean date of deposition of 1946.4). Given evidence for the rapid filling of this feature, this is clearly the period when the feature was most likely filled. The bottle with the ca. 1958 date indicates that this pit was open at least until that year.

The D.E. McNicol plate found in Level 9 was manufactured between 1919 and 1928. Although this is earlier than the date of formation suggested by the bottle data, the presence of this plate in the feature does not dispute a later date of filling. Ceramics are curated artifacts in our culture, and many years typically separate their date of manufacture and date of discard.

Excavation Unit 3 (Feature 3)

Excavation unit 3 was 1x1 meter in size and tested a rectangular depression that measured 3.5 by 5 m in size (Figure 8). This unit was excavated to a depth of 50 cm in five, ten cm levels (Figure 9). Field observations led to the conclusion that this was the site of a shed or outbuilding of possible wood frame construction that was used as a midden after demolition.

Level 1 (0-10 cm)

Bottle glass Eight fragments of glass are identified as the remains of a single glass canning jar. These fragments all have a slight aqua tint. Represented among the fragments, all of which articulate, are the body, shoulder, and finish to a wide mouth jar (2.25 in (5.7 cm) inside diameter) with a continuous thread closure. The mold seam for this bottle crosses the threads, indicating that the threads were mold-blown. The lip of this jar has been ground. This jar is the type that became popular after Mason's 1858 patent. The fragments represented here could date anywhere from about 1860 to the turn of the century.

Four fragments of nondiagnostic bottle glass were found in this level; their original form cannot be determined. Included are two aqua tint sherds, one colorless glass fragment, and a fragment of amber glass.

Flat glass A single piece of aqua tint flat glass was found in this level. It measures .115 in (2.75) mm in thickness. This probably represents a fragment of window glass.

Chimney Glass A piece of colorless chimney glass was found in this level. This fragment comes from the upper rim of the chimney; its edge has been decorated with a crenelated pattern.

Ceramics The single sherd of undecorated whiteware from this level probably represents a plate. This sherd contains part of the base with footring.

Nails A single common head wire nail measuring 6 in (15.2 cm) in length was found in Level 9. The head of this nail is missing, and it has an acute bend in its shank.

Brick Two small brick bats are included; neither contains any diagnostic markings or traits and neither is complete enough to allow any meaningful measurement.

Tin can fragments Seven small fragments of thin tin, probably from tin cans, were found. No seams or other diagnostic parts were present on these pieces, so another origin is possible as well.

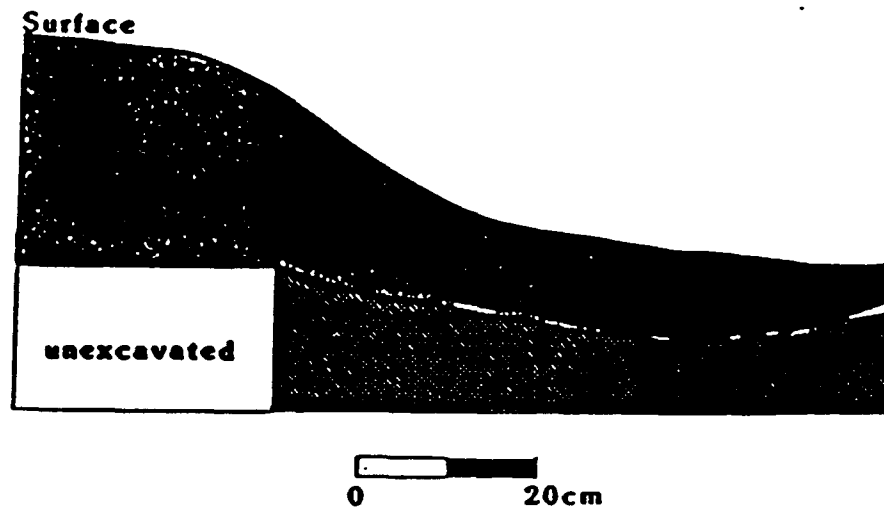
Level 2 (10-20 cm)

Bottle glass A single piece of curved glass, probably from a bottle, was collected from this level. This fragment is amber in color and is from the body or neck of an



FIGURE 8

Upper: View of excavation in progress, looking north.
Lower: View of excavation in progress, looking north.



 Grayish Brown Clayey Silt

 Grayish Brown Clay

North Wall

FIGURE 9
Soil profile of excavation unit 3.
39LM200

unidentified container.

Melted glass One small piece of melted glass was observed. It was originally colorless or possibly had an aqua tint.

Ceramics Three sherds of whiteware are from this level. Two of these are rim sherds and the other is from the undecorated body of an unidentifiable vessel. Of the rims, one is a small, undecorated sherd from a vessel of unknown form. The other is probably from a serving vessel; it is decorated with a scalloped edge and has a relief pattern and gilding along the rim.

Nails Two identical galvanized wire shank tacks were found in this level. They are 1 in (2.54 cm) in length and have heads .4 in (1 cm) in diameter.

Tin fragments Six fragments of tin were observed, four of which are small, non-diagnostic fragments, probably from tin cans. Another fragment is what appears to be a section of a sanitary seam from a can. The sanitary seam is a double seam that was introduced about 1895. It replaced the earlier simple seam, made by overlapping and soldering the tin which was in use from the mid 19th century up to as late as 1920 (Rock 1980). The remaining piece has three perforations in it that were apparently made by piercing the tin with wire nails or a similar device. Possible uses are for patching or in a pie safe (a cabinet which houses pies - the tin is placed along the shelving and perforated to allow air to circulate which in turn keeps the pies fresh).

Wood Four pieces of wood were included with the materials from the 10 to 20 cm level. These are not charred, and were not identified as to species. No evidence of cultural use was noted.

Brick Four small fragments of brick were collected. These are all from the interior of bricks with no surfaces present.

Level 3 (20-30 cm)

Bottle glass Two complete bottles and seven fragments of bottles were included with the material from this level.

The first whole bottle is a jar that has been manufactured by an automated process. It stands 4.25 in (10.7 cm) high and is about 2.75 in (6.9 cm) in cross section (Plate 2,a). It is made of colorless glass and has a circular cross section and a cylindrical body. This jar does not have a screw closure but instead has a well defined ledge encircling the exterior surface of the neck, and may have served to anchor a spring clip which in turn held on a liner that covered the opening of the jar (Jones and Sullivan 1985:166). This jar is embossed on its base with:

1901
3 (device)
12

The device is an anchor with an "H" superimposed over it; this is a symbol of the Anchor Hocking Glass Company of Lancaster, Ohio. This device was in use until 1938 (Toulouse 1971:47-48).

The second whole bottle is a prescription type bottle made of colorless glass. A portion of a cork is still present in the neck (Plate 2,b). It is about 6.75 in (17.1 cm) high and is very slightly kidney-shaped in body cross section. It is embossed on the base with:

L.E.D. Co.

Unfortunately, this mark could not be identified. The lip of this bottle is hand finished, however, which places its manufacture prior to about 1920.

The bottle fragments include four neck/finish fragments, one base fragments, and 11 body fragments. Nine fragments of colorless glass and one of amber glass from this level are all probably fragments of the bodies of glass bottles. The body fragments include one colorless and one amber glass fragment which are notable because they are embossed: the colorless glass fragment carried the letters "...AL LA..." and the amber fragment carries "...HIS..." These probably are part of the slogan "FEDERAL LAW PROHIBITS SALE OR REUSE OF THIS BOTTLE" which was required on liquor bottles between 1933 and 1964 (Munsey 1970). The aqua glass base fragment is relatively nondiagnostic. The four neck/finish fragments are as follows:

(1) - a lip to an applied or hand tooled finish. This is a very small fragment of what appears to have been a prescription lip. It is made from colorless glass (Plate 3,a).

(2) - This is the lip, neck, and part of the shoulder of a bottle made from glass that is slightly solarized, indicating manufacture during the period from about 1880 to 1915 (Munsey 1970). This fragment is characterized by a prescription lip which has been crimped on one side apparently for pouring. The lip on this bottle has been hand finished, indicating manufacture prior to about 1920, consistent with the chronological interpretation of the solarized glass (Plate 3,b).

(3) - a small prescription lip bottle fragment including the finish, neck, and part of the shoulders. The lip on this colorless glass bottle has been hand finished, indicating manufacture prior to about 1920.

(4) - the neck of a bottle made from colorless glass. This neck is characterized by two well spaced neck rings. This neck has been hand finished, indicating manufacture prior to about 1920 (Plate 3,c).

Chimney glass One fragment of the body of a colorless glass lamp chimney was found.

Pressed glass The fragment of the base to a pressed glass object, probably something like a bud vase, was found in this level (Plate 3,d).

Ceramics Nine sherds of ceramics vessels were found, five of which were rim sherds. The rims included four that were undecorated whiteware and one that carried a subtle



a

b

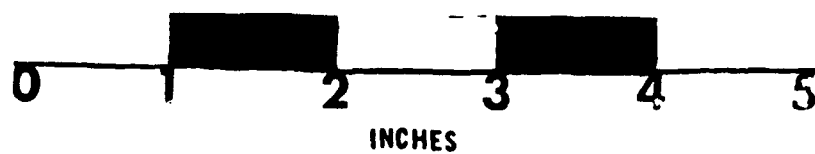


PLATE 2

Feature 2 Artifacts: a, colorless jar; b, colorless prescription bottle.

molded decoration. One of the undecorated rims was from a bowl. Of the four body sherds, three were undecorated whiteware. The fourth body sherd carried a polychrome floral decalcomania decoration.

Nails Nine nails or nail fragments were found. These include what appears to be a fragment of a relatively small common head machine cut nail, one complete common head wire nail 1.5 in (3.8 cm) in length, three fragmentary common head wire nails, and four complete wire shank galvanized tacks that are 1 in (2.54 cm) in length. None of these specimens are bent to any appreciable degree.

Wood Two large pieces of wood and numerous small fragments of wood are included with the materials from this level. None of this wood has been burned, and it has not been identified as to species. No evidence of cultural modification was observed.

Tin can fragments Ten fragments of tin cans are included in the artifacts from this level. Eight of these are small, non-diagnostic fragments that are only assumed to have originated from a can. Another small fragment clearly is from a can because it consists of two pieces fastened with a simple seam. Cans made using a simple, or overlapped and soldered seam were in use from about 1850 to as late as 1920 (Rock 1980).

The remaining fragment is a large can section including much of the body and one end. From cut marks, the other end was removed by cutting it out, probably with a knife. The body and end of this can are formed with simple seams, and the remaining end has a solder-filled hole in it. This can has a diameter of approximately 3 in (7.6 cm) and a height of about 4 in (10.1 cm).

Shoe fragments Eleven small to large fragments of one or more shoes are present. More than one shoe is probably represented. One fragment consists of the heel portion of a man's shoe; the heel is fastened with iron nails. The other fragments include sole fragments and fragments of the uppers.

Hasp Part of an iron hasp was found in this level. The portion present consists of the hinge and the flap that is perforated for the staple. This flap measures 1.5 in (3.8 cm) in height and 3 in (7.6 cm) in width.

Brass chain Two short sections of brass chain made of individual twisted oval links were found.

Bone One small unidentifiable fragment of burned bone was found in this level.

Inner tube Six fragments of what appears to be a multiple layer inner tube were found in this level. The condition of these specimens prevents further speculation on the original form represented by any of these pieces.

Twisted wire whip This is a whip or beater that probably was used to beat dust out of small carpets. It is made of heavy gauge wire that is twisted together and which is bent back onto itself to form the whip. The ends of the wire were fastened into a wooden handle, and were held in place with a metal ferule which is still attached to this artifact.

Level 4 (30-40 cm)

Bottle glass A large quantity of aqua, colorless, amber, and emerald green bottle glass was recovered from this level.

The seven fragments of emerald green glass included one finish fragment and four neck or body fragments of one shade and a single body fragment of a slightly darker shade. The only diagnostic fragment was the finish fragment, which was molded for a crown type closure. The crown closure uses the "bottle cap" that is in common use today. This closure was invented, patented, and introduced by William Painter in the early 1890s (Lief 1965) (Plate 3,c).

The eleven aqua tinted fragments include several that articulate. Two pieces articulate to form the base to a bottle with a body that is rectangular in horizontal cross section. Another three fragments articulate to form the base and part of the body of a rectangular bottle with four inset panels and chamfered corners. The two small panels are embossed:

DR. S. PITCHER...
and
CASTORIA

This is obviously a Dr. Samuel Pitcher's Castoria bottle (Baldwin 1973:390; Denver 1968:76). This bottle has "B 10" embossed on its base. Although the neck and finish are missing on this bottle, this bottle was probably neck blown and hand finished and was thus probably manufactured prior to about 1920 (Jones and Sullivan 1985).

A single aqua fragment is from the lip of a canning jar; a section of an exterior thread is present on this fragment as is a section of the lip, which has been ground. This specimen is similar to the eight articulating fragments of a canning jar found in level 1 but the threads on specimens from this level are substantially lighter than those from Level 1.

The remaining sherds of aqua glass are all nondiagnostic.

A total of 41 fragments of colorless glass were found in this level; of these 36 are relatively nondiagnostic. Of the remaining five, three are from a wide mouth jar with interrupted threads. These three sherds are from as many as two bottles, and were manufactured using automated technology. Another fragment includes part of the base and body of a bottle. The base of this bottle is marked with the letter "N" inside a rectangle with slightly rounded corners. This is a mark of the Obear-Nester Glass Company of East St. Louis, Illinois, in operation since 1894. This mark has apparently been in use since the founding of the company (Toulouse 1971:373-374).

The final colorless sherd is a base and part of the body of a bottle that is circular in horizontal cross section. The base of this bottle is embossed:

[device]
K7520
3-8

The device is a large "H" sheltering an "A" between its legs. This is a mark of the Hazel-Atlas Glass Company of Wheeling, West Virginia. This particular mark was in use between 1920 and 1964 (Toulouse 1971:239).

Four fragments of amber glass were found and are presumably from bottles. None of the fragments are, however, particularly diagnostic.

Chimney glass A single sherd of colorless glass from a lamp chimney was found in this level.

Flat glass Three fragments of flat glass, probably from windows, were found in this level. These all have slight aqua tints, and measure .070 in (1.7 mm), .075 in (2 mm), and .095 in (2.25 mm) in thickness.

Pressed glass Three fragments of pressed glass were identified, two of which articulate. The two articulating fragments form a large portion of a spice shaker (salt or pepper) with a continuous thread closure. This heavy glass artifact measures about 2.75 in (6.9 cm) in height (Plate 3,f). The other piece of pressed glass is very small and the vessel of which it was once a part cannot be identified.

Milk glass A single milk or opal glass artifact was found in this level. This consists of a rim sherd where the rim was formed by folding over the glass.

Ceramics A total of 45 sherds of ceramic vessels were recovered from this level. Included here are:

- (1) - two articulating sherds of a deep mixing bowl with a diameter of 5 to 6 in (12.7 to 15.2 cm). This is made of undecorated whiteware.
- (2) - five articulating sherds of a small whiteware bowl decorated with a polychrome, floral decalcomania and with a scalloped rim with molded designs.
- (3) - a section of a cup made of a heavy undecorated whiteware.
- (4) - 26 undecorated whiteware and ironstone sherds including two fragments that could be identified as coming from small bowls and two which are interpreted as coming from ironstone serving ware.
- (5) - five sherds representing two patterns of whiteware that are decorated by the use of scalloped rims and molded decorations along the rims.
- (6) - two sherds that include scalloped rims, molded decorations along the rim, and, on one, a gilded decoration and, on the other, a polychrome, floral decalcomania decoration.
- (7) - one body sherd with a brown floral transfer decoration.
- (8) - two bases with maker's marks. One is a black stamped mark that has the royal arms device below which is:

J & G MEAKIN
HANLEY
ENGLAND

The presence of England on this mark indicates manufacture after about 1891 (Plate 3,g). This particular mark has been in use since about 1890 (Godden 1965:427). The other maker's mark could not be read.

- the base and part of the body of a stoneware crock.

Nails Ten nails or nail fragments were identified. These include two large wire nail fragments, two small wire nail fragment, one wire nail bent almost into a "U" shape and which measured about 2.5 in (6.3 cm) in length, one wire nail with a slight curving bend and a length of about 3 in (7.6 cm), one wire nail with an acute but slight bend and a length of about 4 in (10.1 cm), and three galvanized wire shank tacks which are straight and about 1 in (2.54) in length.

Bone Five pieces of animal bone, one which has been badly burned, were identified in the collection from this level. Three of the four unburned specimens are probably diagnostic, but no attempt to determine their species was made.

Linoleum Fifteen very small pieces of linoleum were identified. These had a polychrome pattern including green and brown tones.

Inner tube Four small fragments of what appears to be a rubber composition inner tube were present in the materials from this level.

Wire Eleven pieces of very small gauge wire which had been coiled were found; it is possible that these were all once part of the same coil but rusting had made them into many pieces.

Tin Eight pieces of tin, most of which were very small, were observed. None of these were diagnostic in any way.

Barbed wire One small fragment of single strand barbed wire with a simple twisted two pointed barb was found.

Cartridge A loaded .22 caliber cartridge was found in this level. This cartridge carries a "SUPER X" headstamp.

Button The brass front to a two-piece button with an iron back was identified in the collection. This button has a diameter of .65 in (1.6 cm) and carries a stamped fleur-de-lis.

Level 5 (40-50 cm)

Bottle glass Bottle glass from this level included numerous fragments of aqua,

amber, and colorless glass from bottles.

The single amber fragment was from a bottle that was probably circular in horizontal cross section. This small fragment carried embossing, but none of the elements or letters of this embossing could be identified.

Nine fragments of colorless glass were found. Of these, eight were nondiagnostic body fragments. The remaining piece was a small fragment of the lip to a prescription finish.

Thirty-one fragments with an aqua tint were found in this level. Of these, 21 were relatively nondiagnostic fragments of the body, base, and neck of bottles. Several of the body fragments indicate they were from bottles with faceted bodies. The larger fragments are suggestive of hand finished manufacture, which would place them before about 1920.

Two of the aqua fragments are from finishes. One is a hand finished Perry-Davis type finish. This would date prior to about 1920 based on its method of manufacture. The other is a fragment of a continuous thread canning jar finish made with an automated process, which places its manufacture after about 1920.

The remaining eight fragments are from the bodies of bottles, and each carries embossing. Embossing elements are small, and could not be identified beyond one or two letters.

Milk glass One fragment of milk or opal glass was found in this level. This is a flat piece which cannot be further identified.

Melted glass A single piece of melted aqua tint glass was found.

Ceramics A total of 34 sherds were recovered from this level. Vessels represented are predominately bowls and plates, although a pitcher is also represented.

A total of 27 sherds, including rim, body, and base fragments, are of undecorated whiteware. These include one base to a dinner plate, several fragments of smaller plates, and fragments of a small bowl. Two large sherds articulate to form a section of a cream pitcher. Another four heavy sherds articulate to form a large section of a deep bowl with a diameter of 3.75 in (9.5 cm). Three sherds articulate to form a large section of a shallow bowl with a diameter of about 6 in (15.2 cm). This bowl has a stamped maker's mark:

ROYAL IRONSTONE CHINA
[ROYAL ARMS DEVICE]
JOHNSON BROS
ENGLAND

This is a mark of the Johnson Bros. Ltd., which was formerly the J.W. Pankhurst & Company (Plate 3,h). This particular device was used between 1883 and 1913 (Godden 1965:355-356). The inclusion of "England" on this mark indicates manufacture after 1891, and the fact that this mark was applied with stamped ink indicates a 20th century date (Godden 1965).

A total of seven sherds are decorated. Five of these, three of which articulate, are rims which carry a molded decoration. Another mold decorated sherd comes from the body of a vessel. The remaining sherd, which is a large sherd including rim and body sections, is decorated with a brown floral transfer decoration and molded decorations on the body.

This is a fragment of a bowl (Plate 3,i).

Nails A small common head wire nail, approximately 1 in (2.54 cm) in length was found. This nail has an acute bend near its tip.

Garment hook A large iron garment hook was found in this level.

Unidentified iron artifact A small piece of flat iron, less than 1 in (2.54 cm) square, was recovered with the material from this level. It is crimped on two sides, and has two parallel slits towards one end. Its function is uncertain.

Feature 3 Discussion

Feature 3 contained one of the largest quantities of artifacts of any feature at 39LM200. This and several other aspects of the collection from this feature serve to distinguish it from other contexts at this site.

One notable characteristic of the collection from Feature 3 is that it contained an assemblage that would be expected of a residential occupation. Notable here is a large quantity of ceramics that are virtually non-existent in the other site contexts. This fits well with the field interpretation that this was a refuse area for the farmstead.

Looking at the collection from a chronological point of view, the materials appear to have been deposited in this context over a relatively wide range of time starting perhaps in the very late 19th century and lasting well into the 20th century. This is suggested by the presence of numerous artifacts that date to the period around the turn of the century, including numerous bottles that have hand finished lips, indicating a pre-1920 date; numerous bottles made with an automated process, indicating a post-1900 date; the presence of solarized glass from the 1880 to 1915 period; the presence of an Anchor-Hocking bottle made from ca. 1900 to 1938; the presence of a post-prohibition ("Federal Law Forbids...") liquor bottle dating from 1933 to 1964; and the presence of a crown-type finish, dating after about 1900.

This feature thus appears to be relatively well preserved and appears to be a domestic refuse deposit associated with the occupation of this site around and after the turn of the century.

Excavation Unit 4 (Feature 4)

Feature 4 was described as a disturbed area with rock, barbed wire, and other debris (Winham and Lueck 1984). This unit was investigated with a 1x1 m test pit, which was excavated to a depth of 40 cm in four 10 cm levels. Only the upper two levels contained cultural material.

Level 1 (0-10 cm)

Bottle glass A single piece of colorless glass was found in Level 1. This fragment is embossed with a device of some sort, but it cannot be identified. It is probably from a bottle.

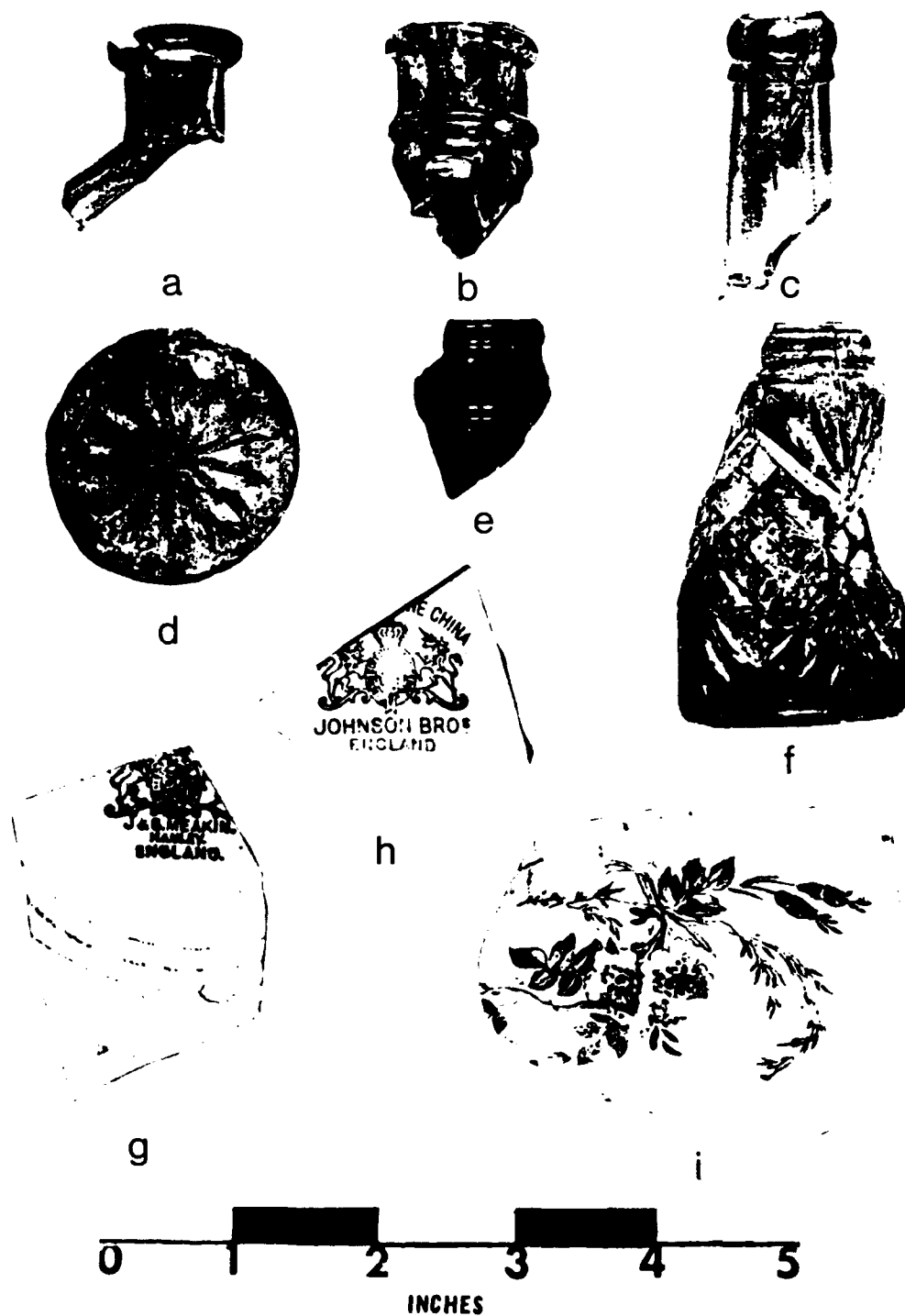


PLATE 3

Artifacts from Feature 3: a-c, bottle necks; c, pressed glass base; e, crown closure bottleneck; f, pressed glass spice shaker; g-i, ceramics.

Nails Three wire nails were found in this level. These include a finish nail 2.5 in (6.3 cm) in length, a common head nail 1.25 in (3.17 cm) long, and a common head nail 2.5 in (6.3 cm) in length. The larger common head nail has a slight bend in the mid-section of its shank; the others are not bent.

Wire A single piece of heavy gauge wire was recovered from this level. This piece is about 3.75 in (9.5 cm) in length, and is bent in several places.

Plastic A single, thin piece of transparent yellow plastic was recovered from this unit.

Bone A total of 28 animal bones were found in this unit. Most of these appear to be diagnostic elements from small animals, and most are probably bird bones. No attempt was made to identify these bones as to element or species.

Level 2 (20-30 cm)

Bottle glass A single fragment of a colorless glass bottle was found in this level. This fragment is from the shoulder to a bottle that was probably oval or kidney shaped in horizontal cross section. This fragment has a mold mark and a "ghost" seam which indicates manufacture using an automated process. This indicates a 20th century date for this artifact.

Nails Two nails were found in this level. Both are common head wire nails. One of these measures 5 in (12.7 cm) and the other 2.5 in (6.3 cm) in length. The larger nail is slightly bent in several places.

Tin can fragments Two tin can fragments were found in this unit. Both are seam fragments and both seams are simple seams, which would indicate manufacture between about 1850 and 1920 (Rock 1980).

Bone Six bone fragments are in this level. Several of these are probably diagnostic elements and are probably bird bones. No attempt to identify these bones by element or species was made.

Lead splatter A small piece of lead "splatter" was examined from this level. This is simply a piece of once-molten lead which was dropped while molten and which formed a splattered shape.

Lead tube A small lead tube with a lead cap was recovered from this level. This has been folded over onto itself as the contents were squeezed out. The contents of this tube are unknown.

Rubber gasket or tire A section of what is probably either a fabric covered rubber gasket or solid tire was included in the materials from this level.

Feature 4 Discussion

This feature is shallow and contains a low frequency of artifacts. The artifacts are not overly useful in terms of interpreting the function or age of this context. The only artifacts that are age diagnostic are wire nails and a fragment of a bottle made by an automated process. Both are indicative of a date probably in the 20th century, although the nails could date as early as 1886.

Excavation Unit 5 (Feature 5)

At the time of its initial inventory in 1983, Feature 5 was described as weed patch (depression?) which was very overgrown (Winham and Lueck 1984). During the testing of 39LM200, this feature was difficult to define and was interpreted as a natural depression. This unit was excavated to a depth of 40 cm in 10 cm levels. No artifacts were recovered in levels 3 and 4 (20 to 40 cm).

Level 1 (0-10 cm)

Bottle glass A single fragment of colorless bottle glass was present in the materials from Level 1. This was from the base to a bottle that was circular in horizontal cross section. It carries a maker's device, but this device could not be identified because its molding was indistinct.

Nails A complete nail and a nail fragment were found in this level. Both are common head wire nails. The complete nail is not bent and measures 4 3/8 in long.

Vacuum tube The base of a vacuum tube was found in this level. Vacuum or electron tubes were used for a variety of electrical applications, in particular in radios, starting around the turn of the 20th century (Anon 1948a:340H). The base is made of black bakelite and has four metal prongs projecting from it. Bakelite is a synthetic resin invented by L. H. Baekland in 1909 (Anon 1948b:212). On the inside of the tube, the bakelite is embossed with:

01
SHAW

The word "SHAW" is enclosed within a rectangle which is superimposed over a diamond and represents a manufacturer's device. On the proximal end of the tube the bakelite is embossed with:

419 X ADAPTOR
PATENT PENDING
MADE IN U.S.A.

around the perimeter of the tube and in its center with:

ALDEN
NA-ALD
BAKELITE

This interior embossing is apparently a device which refers to the manufacturer of the bakelite itself.

Pumice A small piece of volcanic pumice was found in this level. No evidence for the cultural use of this specimen was noted.

Level 2 (10-20 cm)

Bottle glass Two fragments of bottle glass are present in the materials from Level 2. These include one amber and one solarized fragment.

The solarized fragment is a very small sherd of the finish of a bottle; it appears to have been from a prescription lip. The fact that this originally colorless glass has been solarized indicates that it was manufactured during the period between 1885 and 1915 (Munsey 1970).

The amber glass fragment is very small and appears to be from the body of a bottle of unidentifiable form. It is embossed with "5H" in letters that are 1/8 in (.3 cm) tall.

Nails One nail and two nail fragments are from this level. The complete nail is a common head wire nail that has been bent in several places. Its original length was about 4 in (10.1 cm). A fragment of a small common head wire nail was also present, as was the shank of a large wire nail.

Barbed wire and fence staple A fencing staple and a section of barbed wire were found in this unit. The barbed wire is single strand wire with a simple barb made by twisting a piece of pointed, flat iron around the single strand. The fencing staple is made from pointed wire and is "U" shaped. It measures about 1 1/8 in (2.85 cm) in length.

Feature 5 Discussion

Feature 5 was also very shallow and contains few artifacts. Age diagnostic artifacts include wire nails, which date after 1886; a fragment of solarized bottle glass, dating from the 1880 to 1915 period; and a bakelite vacuum tube, dating after 1909.

Excavation Unit 6 (Feature 6)

Feature 6 was the only feature investigated that was being actively impacted by the operation of Lake Francis Case. This feature, which was described as an area of rubbish exposed in the cutbank, was exposed by shoreline erosion (Winham and Lueck 1984). This area was tested with a 1x1 m unit, which was excavated to a depth of 40 cm in four 10 cm levels. Artifacts were recovered from Level 1, but not from levels 2, 3, or 4.

Level 1 (0-10 cm)

Bottle glass An almost complete bottle, with a small part of the neck and finish broken away, was collected from this unit. This bottle is characterized by complex seams on its finish, indicating manufacture using a fully automated method and, therefore, a 20th century date. This colorless glass bottle is 4 1/8 in (10.4 cm) tall and has a body that is cylindrical in shape and which measures about 1 3/16 in (3 cm) in diameter. The finish on this bottle has interrupted threads. The base of the bottle is embossed with:

824

6

F

The "F" is a maker's device and is contained within a sextagon. This is a mark of the Fairmount Glass Works, Inc., of Indianapolis, Indiana, one of a number of consecutive names for the Fairmount Company which was established in 1889 and which became a unit of Glass Containers, Inc., in 1968. This particular device was in use between 1945 and 1960 (Toulouse 1971:200-201).

Glass insulator An aqua-green tint glass insulator with part of its skirt broken off was found in Level 1. This insulator measures about 3.5 in (8.8 cm) in height and is embossed on one side of the skirt with:

HEMINGRAY

No 9

and on the other side (which is largely broken away) with:

...NT

...93

The "NT" is obviously the tail end of the word patent and the "93" the last two digits of the year 1893.

Nails Twelve complete nails and two nail fragments are included in the artifacts from this level. The two fragments are shank sections of wire nails. The complete nails include two galvanized roofing tacks with 1 in (2.54 cm) shanks. The remaining nails are all common head wire nails. These wire nails measure 5 in (12.7 cm)(multiple bends), 5 in (12.7 cm)(no bends), 4.5 in (11.4 cm)(multiple bends), 3.5 in (8.8 cm)(no bends), 3.5 in (8.8 cm)(slight bend), 3.5 in (8.8 cm)(acute bend), 3 in (7.6 cm)(acute bend), 2 in (5 cm)(slight bend), 2 in (5 cm)(acute bend), and 1.75 in (4.4 cm)(acute bend).

Tin cans Four large to small sections of tin cans are included in the collection. These include one relatively nondiagnostic can end and three sections which contain seams. Two of the sections with seams are small and distorted, but are notable because the seams are sanitary seams. Sanitary seams were in common use following about 1895 and had totally replaced the simple seam by about 1920 (Rock 1980). The final can section is a largely complete can with a diameter of about 3.25 in (8.2 cm)

and a height of about 4.5 in (11.4 cm). One end of this can has been cut out to open it. This can was manufactured using sanitary seams.

Bottle cap A single bottle cap was found in this unit. It is an iron cap and is from a bottle with a threaded closure. It measures about 1 1/8 in (2.8 cm) in diameter.

Battery core The graphite core to a small diameter dry cell battery was present in the materials from this level. This core is less than 2 in (5 cm) long and is about 5/16 in (.79 cm) diameter.

Mower blade A heavily rusted iron mower blade was found in this level. This blade is roughly triangular in shape, and was sharpened on two sides.

Miscellaneous iron artifacts Three miscellaneous iron objects were found in Level 1. These include a large iron rivet with a 3.5 in (8.8 cm) long shank, a heavy gauge section of iron wire measuring 5.75 in (15.8 cm) in length and bent over to form a hook on one end, and a section of a heavy rivet.

Leather A piece of leather with two ca. 2.5 in (6.3 cm) unbent wire nails projecting from it and folded and riveted with two copper rivets was found in this unit. The function of this leather, which has a maximum dimension of 2 by 5.5 in (5 to 13.9 cm), is unknown.

Lug nut A six sided lug nut with a rounded end used to fasten an automobile wheel was found in this unit.

Feature 6 Discussion

This feature was interpreted as a refuse area. The lack of ceramics and the presence of artifacts such as a mower blade and lug nut suggests that it was not an area of domestic refuse. The artifacts found within this feature were restricted to 10 cm below the surface, and they were not present in any great quantity. Those that were present appear to date from the 20th century, including wire nails, which date after 1886; sanitary seam cans, which date after about 1895, and a bottle manufactured between 1945 and 1960.

Conclusions and Recommendations

The artifacts from six distinct site contexts, identified as Features 1 through 6, were examined:

In the field, Feature 1 was thought to be a root cellar. Nothing from the analysis contradicts this interpretation, but the artifacts do indicate that this feature was either filled or disturbed since World War II. In either event, this feature possesses no National Register significance because of its recent age (that is, it is less than 50 years old).

Feature 2 was interpreted as a privy in the field. The size and depth of this feature and the nature of its fill (numerous large, complete artifacts) is entirely consistent with such an interpretation. The artifacts from this feature indicate that it was filled rapidly and that it was filled in the 1940s or 1950s. A highly speculative suggestion has been offered that this feature may have been formed after the acquisition of this site by the United States. At any rate, despite an apparent high degree of integrity, the very recent age of this feature

shows it to have no archeological significance.

Field observations of Feature 3 suggested that it was the site of a shed or outbuilding that served as a midden after demolition. This feature contained the largest quantity of artifacts from 39LM200. These artifacts appear to have been deposited there from the very late 19th century up to the mid 20th century. The material from this features includes a large quantity of ceramics, which occur in low frequency in the other site contexts studied. This and other contents of the feature suggest it was associated with domestic activities. The artifact data support the formation of this feature during the active use of this site and are consistent with an interpretation of this as a midden associated with domestic activities at this site.

Feature 4 was originally identified simply as a disturbed area. During excavation no identifiable limits were found, and only a shallow, low frequency scatter of artifacts were encountered. The artifacts suggest a 20th century use of this area.

Feature 5 was interpreted as a natural depression during excavation. The artifacts found in this area did not extend below 20 cm and were also low in number. Age diagnostic artifacts indicate use of this area in the 20th century.

Feature 6 was originally identified as a trash deposit being eroded by Lake Francis Case. Excavation showed this to be an extremely shallow deposit with relatively few artifacts. These artifacts dated primarily to the 20th century, and were non-domestic in character.

Except for Feature 3, the features excavated at 39LM200 appear to date to the 20th century. Two of these, Features 1 and 2, probably date to the middle part of this century. Features 4, 5, and 6 are all shallow deposits with low artifact frequencies and may simply be areas of somewhat concentrated surface refuse.

Feature 3 is a high frequency concentration of domestic artifacts associated with both the 19th and 20th centuries.

Although some of these features appear to have good integrity of preservation, their primary contribution would be to the study of the Euro-American agricultural settlement of this area during the 20th century. While this is a legitimate area of research, the artifact data from this site have not presented the basis for a compelling argument that this site possesses significant data for such a study. In the 20th century, where exceptional historical and oral historical information exists, archeological data must be equally exceptional to justify a determination of National Register significance. This does not appear to be the case for 39LM200.

*39LM200
AND THE EARLY YEARS
OF LYMAN COUNTY*

As stated earlier in this chapter, 39LM200 was a homestead property patented in 1901, but occupied in the 1890s by the Alfred Peter Rutan family. Some of the early history of the area that may have influenced the events that shaped the history of this site will be presented below.

On February 10, 1890, the Federal Government allowed settlers to acquire property on the large tracts of land of the Great Sioux Indian Reservation, west of the Missouri River. Naturally, some people had already squatted in various parts of the reservation. On February 11, 1890, settlers were allowed to cross the Missouri River at Chamberlain, South Dakota, and enter into what was to become Lyman County. It is not known for sure exactly when Alfred Peter Rutan made the crossing and staked his acreage although it was in the 1890s.

In May, 1893, Lyman County was officially organized. The county was named for Yankton County pioneer, W.P. Lyman. There were several settlements in the county in 1893, including Fort Hale and Oacoma. Oacoma, established in 1890, was originally named Gladstone and was the first county seat. (Old) Lyman was established in 1890 and had the first official newspaper in the county. (39LM200 was situated between Old Lyman and Oacoma). Oacoma was the western landfall for the ferry crossing originating in Chamberlain. This was one of the few means available for crossing the river (another being crossing the river during the winter when the ice was thick enough). This method of crossing lasted until a pontoon bridge was placed across the river in 1893. The structure was built by having the bridge deck rest on flat boats, tied side by side. When river traffic needed to proceed past the bridge, one end of the pontoon was released and allowed to float free, thus allowing passage. Oacoma's outlook was good and at one point it had three hotels, several banks and many other business establishments.

In 1905, the Milwaukee Railroad built a bridge over the Missouri River, from Chamberlain to near Oacoma. This action resulted in the decline of Old Lyman. The residents of Old Lyman assumed that the railroad would be routed through their town, since this was the original "Trail to the Black Hills". When it was realized that Oacoma would be the chosen site, the town of Lyman was moved to and was absorbed by Oacoma.

Oacoma seemed to be doing well until 1922, when the county seat was moved to Kennebec. Oacoma's salvation was only temporary while it was still a stopping point for travelers who crossed the Missouri River. This changed when in 1925 a new bridge was built across the river. This allowed travelers to drive the short five miles to Chamberlain, virtually eliminating the need to stop in Oacoma. The town soon began to dwindle, never fully regaining its original position in Lyman County history.

Oacoma, Chamberlain and possibly Old Lyman, no doubt played major roles in the history of the Rutan family. However, there is no documentation in the archeological record, the historical record or the oral history which would indicate that the Rutan family played a significant role in the history of the area. This in no way should be misconstrued to reflect negatively upon the family. Like the majority of families in the area, their contributions may have been less than some, but together they made up the heart of the history of the region.

Recommendations

The centerpiece of Federal historic preservation legislation is the National Register of Historic Places, created by the National Historic Preservation Act of 1966. Determining if a site is eligible, potentially eligible or not eligible for listing on the National Register is therefore a basic step in determining the management needs of a specific resource. This was the purpose of this study.

The criteria which determine whether a property is eligible for the National Register are set forth in 36CRF60.6:

National Register criteria for evaluation. The quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

(a) That are associated with the events that have made a significant contribution to the broad patterns of our history; or

(b) That are associated with the lives of persons significant in our past; or

(c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) That have yielded, or may be likely to yield, information important in prehistory or history.

In making recommendations for 39LM200 four basic criteria were utilized. These were: (1) physical condition of the site, (2) the site content, (3) its relationship to regional research questions, and (4) the contribution of the people involved with the site to the history of the area.

The physical condition of 39LM200 is poor. The site has, at some point in the past, been deliberately destroyed. The site has also been affected by reservoir erosional activities, as well as by recent motorized traffic. What few structural features that were once part of the site are gone and the few subsurface remains have been adversely affected.

The site content, or the presence or absence of a surface distribution, preservation of sub-surface cultural deposits or features, likelihood of recovering meaningful faunal or botanical remains, or diagnostic artifacts, is fair at best. The surface aspect of the site is all but lost due to human activities. Those subsurface features examined yielded some information but aren't likely to yield any further significant results. The botanical and faunal evidence for the time period involved with this site is unlikely to be considered as differing significantly from the present. Diagnostic artifacts were recovered from the investigation. These aid in determining the temporal attributes of the site and some of the aspects of the material culture of the people involved with the site, however, they add very little to what is already known of the time period involved. Documentation, both written and oral, of the contribution of the people involved with site to the history of the area clearly indicates that no person, or event, made a significant impact on the development of

the area involved in the study.

The conclusions we reached, when factored into the criteria established for National Register eligibility, make this site a poor candidate for inclusion onto the National Register of Historic Places. The site should be considered as not eligible and no further work is necessary.

Chapter Nine

SUMMARY AND RECOMMENDATIONS

The State Archaeological Research Center, under contract with the River Ranch Developers of Sioux Falls, conducted cultural resource investigations at the proposed River Ranch project area. The project domain is located on the west bank of Lake Francis Case, across from the city of Chamberlain, in Lyman County, South Dakota. The investigation took place in order to fulfill requirements established by the U.S. Army Corps of Engineers, Omaha District. The cultural resource project included a survey of proposed impact areas and evaluation of two archeological sites.

An intensive surface survey of approximately 30 acres resulted in no new or previously recorded sites being located within the proposed impact area. This part of the River Ranch Resort project will not impact any cultural resources therefore a recommendation for project clearance is given.

The investigation of 39LM253, a prehistoric site, involved both literature and field work. The literature search indicated that the site may or may not lie within the proposed River Ranch Resort project area. Poor documentation of the site by the initial recorder was the main reason for the apparent confusion. Fortunately an original photograph of the site area, taken at the time of its initial recording, contained enough visual information to allow for a determination that the site area was not located within the proposed project area. The field work, which included an intensive surface survey, an examination of all wave cut banks within the project area and subsurface tests support the conclusion reached during the literature search that the site is not located within the project area. The proposed River Ranch Resort project will have no effect on 39LM253.

39LM200, an historic site, was investigated through means of literature searches, informant interviews and field work. The literature search indicate that the site was a homestead patented in 1901 but occupied from the late 1890s until the 1940s. An interview with a descendant of the original homesteaders confirmed the literature search and also provided some documentation of the physical layout of the site area. A series of excavation units were used to examine six features identified on the site. An analysis of the artifacts recovered from the features reaffirm that the site was occupied in the time span mentioned above. Some of the features appear to have good integrity of preservation, their primary contribution would be to the study of Euro-American agricultural settlement of this area during the 20th century. While this is a legitimate area of research, the artifact data from this site have not presented the basis for a compelling argument that this site possesses significant data for such a study. In the 20th century, where exceptional historical and oral information exists, archeological data must be equally exceptional to justify a determination of National Register significance. 39LM200 is not recommended as eligible for the National Register of Historic Places.

Cultural resources clearance is recommended for all aspects of the project area investigated in this report. If the project boundaries change and any area outside of the areas investigated in this report are to be impacted or if buried cultural deposits are

encountered, then the developers should contact the U.S. Army Corps of Engineers before work proceeds.

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